THIS WEEK'S National Petroleum NEWS

Coming Meetings

American Chemical Society, Cleveland, Sept. 10 to 14.

Kentucky Petroleum Marketers Association, Brown Hotel, Louisville, Sept. 11, 12.

North American Gasoline Tax Conference, Claridge Hotel, Atlantic City, N. J., Sept. 12, 13, 14.

National Petroleum Association, Atlantic City, N. J., Sept. 19, 20, 21.

Ohio Petroleum Marketers Association, Inc., Deshler-Wallick Hotel, Columbus, O., Sept. 26, 27.

National Safety Council and American Society of Safety Engineers, Hotels Statler, Carter and Hollenden, Cleveland, O., Oct. 1 to 5.

Michigan Petroleum Association, Oct. 9, place to be named later.

Society of Automotive Engineers, Production meeting, Detroit, Oct. 10, 11.

American Institute of Mining and Metallurgical Engineers, Mayo Hotel, Tulsa, Oct. 12, 13.

Big Four State Jobbers Association, Kansas City, Oct. 16, 17, 18.

Indiana Independent Petroleum Assoc., Inc., Hotel Severin, Indianapolis, Oct. 24, 25.

American Gas Association, Atlantic City, N. J., Oct. 29.

American Petroleum Institute annual meeting, Baker and Adolphus Hotels, Dallas, Tex., Nov. 12 to 15.

American Institute of Chemical Engineers, Pittsburgh, Pa., Nov. 15 to 17.

Automotive Service Industries Show, Public Auditorium, Cleveland, O., Nov. 19 to 23.

American Association of Petroleum Geologists, Pacific Section, Los Angeles, some time in November.

Society of Automotive Engineers, annual dinner, New York, Jan. 7.

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Fred M. Lege, Jr.

As chairman of the Texas state code committee on marketing and of the Texas Stabilization Committee, Fred M. Lege, Jr., was instrumental in developing the Texas plan of a sliding scale of margins to dealers and commercial consumers to halt price wars, which is now before Administrator Ickes for approval.

Mr. Lege is a relative newcomer to the problems of retail marketing of petroleum products but has had many years' experience dealing with the public as a utility manager. At the age of 20 he was manager of the Texas Mexican Light & Power Co. at Eagle Pass, Texas. In subsequent years he developed, managed and sold a number of gas and electric systems in Texas.

Mr. Lege is a vice-president and director of Magnolia Petroleum Co. and Magnolia Pipe Line Co. He manages the natural gasoline and carbon black departments of the company in addition to his duties as director of sales promotion.

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Fremming Asks Revision of Code Labor Provisions and Ouster of Beaty

By A. M. Petty
N. P. N. Staff Writer

WASHINGTON, Sept. 4 DEVELOPMENTS on the labor front overshadowed all other news in Washington this week as the long-threatened strike broke out in the textile industry.

Outcome of the strike, particularly the Government's reaction, will be closely followed by all industries.

The oil workers' union edged into newspaper headlines with Harvey C. Fremming, its president, calling upon Administrator Ickes to oust Chairman Beaty from the Planning and Co-ordination Committee. Fremming also urged that the oil code's labor provisions be completely re-written.

Unionization of filling station lessees for collective bargaining with the supplying company was recognized in a decision by the Petroleum Labor Policy Board. This decision holds, inferentially at least, that station lessees are "employes" within interpretations of the oil code.

Twice during the week the National Labor Relations Board handed down decisions upholding majority rule in collective bargaining. The decisions were attacked by the National Association of Manufacturers as being inconsistent with President Roosevelt's theory of proportional representation put into practice in settling the automobile strike.

Also, reports quoting a labor spokesman in Wisconsin indicate that the American Federation of Labor will adopt a policy of refusing to participate in any labor discussion to which a "company-dominated union" is a party.

So many demands have been voiced by textile union leaders, that the issues in the strike appear somewhat clouded. Impartial observers, however, seem agreed that recognition of the United Textile Workers as representative of the employes is the basic point.

The union claims a following of several hundred thousand workers in mills from New England to the Gulf. Its claims are disputed by mill owners. Each side is convinced that its estimate of the union's strength is correct. The strike is expected to decide the issue.

While news sources available were somewhat vague on details, it seems that the strike had its roots in an order last May by the NRA which reduced machine operating hours 25 per cent during the summer slump. This order is said to have reduced by 25 per cent the weekly earnings of employes. The textile code originally provided for a 40-hour week with a minimum weekly wage of $12 in the South with slightly higher wages in the North.

The union promptly threatened a strike if the order was not rescinded. To placate the union, the NRA started a series of investigations of the textile industry to determine the justice of the union's demand for a 30-hour week without reduction of pay, and correction of certain other grievances alleged to be in violation of the code.

When the NRA planning and research division reported its investigation disclosed that the textile industry was in no position at present to meet increased

This Week's Cover

THIS striking new service station of Shell Eastern Petroleum Products, Inc., is located at 124th St. and Morningside Ave., New York. The station is built entirely of steel and glass. It was erected in two days. The building is particularly striking at night due to its system of indirect lighting. At its base the building is octagonal permitting the use of more effective display windows. Photo by Albert Rothschild.

labor costs, the strike threat was renewed.

The employers, through George A. Sloan, president of the Textile Institute, contend that the strike amounts to a threat against the government and that the union seeks to force amendment of the code instead of resorting to more orderly processes provided.

Mr. Sloan is represented as feeling that any wage adjustments above the minima provided in the code are matters for bargaining between the employes and management of each plant.

In reality, neither side expects to suffer much from effects of the strike—barring violence.

The involuntary shut-down, if it develops, will reduce surplus stocks which are said to have been mounting at an alarming rate.

The strikers seem to expect that they and their families will be cared for by the Federal Emergency Relief Administration. In some instances, it is believed that they would fare as well on relief rolls as on payrolls.

Harry L. Hopkins, federal relief administrator, has been put on the defensive by reported claims of strikers that the FERA will care for them.

The oft-repeated policy of the FERA is that each relief case is to be treated on its merits wholly apart from any controversy in which the wage-earner may be involved. Unless the strike is found unjustified by the national labor board, the relief administration will furnish relief to strikers' families after careful investigation has shown that their resources are insufficient to meet emergency needs, it was declared.

More specifically, Hopkins said of the textile situation: "If they think we are going to underwrite this strike, they are mistaken."

In his move to have the oil code's labor provisions revised, Fremming was more tactful than the textile workers.

The oil union head did not threaten a strike to enforce his demands. As any interested element of the industry might do in seeking changes in the code, Fremming directed a letter to Administrator Ickes voicing the opinion that labor has not received all the benefits expected from operation of the oil code. He proposed that the Administrator call a hearing for the purpose of re-writing the labor provisions.

Then Fremming recommended several matters to be the "basis of discussions." These included, briefly:

A 30-hour week without reduction of normal pay schedules for all branches of the industry; except hours of clerical employes in drilling, production, refinery and pipeline operations shall not exceed 36 weekly.

Set minimum rate for common labor at 60 cents an hour for all regional areas, with common labor defined as "that labor found in other lines of business and not peculiar to the oil industry."

Strike out the negro and Mexican labor clause which permits 20 per cent reduction in the minimum.

Establish differentials between rates for skilled jobs and minima for common labor at not less than those existing in each geographic area on July 1, 1929; but in no case less than 65 cents an hour for first grade refinery stillmen or 85 cents an hour for rotary drillers.

Eliminate employment of all persons under 18 years of age.

Establish a labor advisory and enforcement board of five members; two to come from within the industry, two from a bona fide union having jurisdiction within the industry, and an impartial chairman.

Mr. Fremming also suggested the following definition of "stripper wells" for inclusion in the code:

"Stripper wells are determined to be that type of operation isolated so as to make relief impracticable; provided, however, that where the total operations with reference to individual ownership is such that the commercial value of production is not sufficient to maintain ordinary operations, that in these cases, the operator may apply to the Petroleum Administrator for relief, relief to be granted solely upon the operator's inability to maintain ordinary operations."

Administrator Ickes declined to comment on Fremming's proposal, saying that he had referred it to the Petroleum Labor Policy Board for study and recommendations.

Mr. Fremming's letter demanding removal of Judge Beaty, however, did draw comment from the Administrator. Mr. Ickes said: "I doubt if I have the power to cause a vacancy on the P. & C. Committee."

The oil union leader had charged that it was "improper" for the chairman to continue on the committee because Phillips Petroleum Co., with which Judge Beaty is connected, was a "persistent violator" of the oil code's collective bargaining provisions.

Frank Phillips, president of the Phillips company, promptly denied Fremming's charges. He said that his company has guaranteed its employes the right of collective bargaining through representatives of their own choosing; although, he added, they have preferred to do so without the aid of an "outside professional organizer." He termed Fremming's attack "unfair" because Judge Beaty is outside the United States on vacation.

Fremming's rejoinder today was a statement in which he charged Phillips with dragging a "red herring across the trail."

The National Labor Relations Board's two decisions which aroused comment involved the Tubize-Chatillon Co., Hopewell, Va., and the Houde Engineering Co., Buffalo, N. Y. In each case, the union, though receiving less than two-thirds of the votes, was declared to be

Daily Average Production, Important Districts, American Petroleum Institute Figures

	Week Ended Sept. 1	Aug. 25
	Barrels	Barrels
Okla. City	137,500	133,350
Total Okla.	460,550	477,050
East Texas	414,850	413,050
Total Texas	1,004,400	999,400
California	460,400	495,000
East of Rockies	1,961,750	1,969,700
Total U. S.	2,422,150	2,464,700
Crude Imports	105,850	143,428
Total New Supply	2,528,000	2,608,128

the representative of all the workers.

In the Hopewell case, the United Textile Workers received 1076 votes as against 531 votes for representation through Tri-City Progressive Ass'n., a nonunion association of employes. In the Buffalo case, the union's margin was less—1105 voted for the Automobile Federal Workers' Union as compared with 647 votes for a so-called company union.

"The Board stands upon majority rule," said the NLRB's formal opinion.

Vigorous statements were issued in each case by the National Ass'n. of Manufacturers protesting that the effect of the decisions was "to deprive the minority who did not desire to deal through the union, of that right of collective bargaining assured them by Section 7a of the NIRA."

The manufacturers' association said this was in violation of the joint interpretations by General Johnson and Donald Richberg, administrator and general counsel, respectively, of the recovery administration. It is also inconsistent, it was added, with President Roosevelt's own stipulations protecting minorities when he settled the automobile controversy.

Unionization of filling station lessees for collective bargaining with the supplying company, is recognized in a decision announced today by the Petroleum Labor Policy Board.

The decision holds, inferentially at least, that station lessees are "employes" of the supplying company in the administration of the code.

Checking a petition from a group describing themselves as "employes of The Texas Co." at Denver, seeking recognition of Filling Station Employes and Warehousemen's Union No. 19439 as their collective bargaining agency, Joseph S. Meyers, U. S. Conciliation Service agent, reported to the PLPB:

"Except for one filling station, company officials disclaimed any knowledge or control over their other stations. The stations are leased, and the claim is made the lessees hire and discharge employes thereof. To classify them as employes of the company is open to argument. Employes must wear the uniforms of the company, and officials say that any acts of discourtesy to patrons coming to their attention would be taken up with their lessees with demand for punishment."

Mr. Meyers reported he verified 26 of the 32 names on the petition. About 47 persons work at these stations, he said.

After making an independent investigation, Oscar Smith, of the PLPB's staff, reported:

"It is quite obvious to the undersigned that the men in question are all employes within the interpretations of the Petroleum Code . . ."

On the basis of these reports, the PLPB certified that "31 out of a total of 47 employes involved," or a majority of 66 per cent, have chosen the union as their collective bargaining agency.

Oil Industry Control to Feature N. P. A. Convention Program

WASHINGTON, Sept. 4

THE thirty-second annual meeting of the National Petroleum Association, meeting this year at Hotel Traymore, Atlantic City, Sept. 19-21, will have a program arranged for the discussion of the industry's most pressing problems and centering around the control efforts under the National Recovery Act.

W. T. Holliday, president of Standard Oil of Ohio, will speak on "A Year Under the Petroleum Code" and Charles Fahy, vice chairman of the Petroleum Administrative Board, will discuss "Refineries and the Petroleum Code." These two speakers will follow the opening talk of Leverette S. Lyon, The Brookings Institute, Thursday morning, Sept. 20, on "The National Recovery Administration."

The meeting will begin Wednesday morning with group conferences which featured last year's meeting. Lubricating oils, gasoline, and traffic will be the topics for discussion. In the afternoon, Charles L. Suhr will open the program with the president's annual address. He will be followed by Frederick D. Sheldon, Kiplinger Agency, who will give "A Review of the Seventy-Third Congress" and Joseph B. Eastman, federal co-ordinator of transportation.

"A Rational Highway Program" will be discussed by J. E. Pennybacker, managing director, The Asphalt Institute, on the Friday morning program. H. H. Anderson, chairman, Labor Sub-Committee, Planning and Co-ordination Committee, will speak on "Labor Relations in the Oil Industry" and Willis Crane, associate counsel, National Petroleum Association, will give "A Revised Analysis of the Federal Oil and Gasoline Taxes."

The annual golf tournament will be at the Seaview Club following a luncheon Thursday afternoon. The tournament is under the direction of Putney Worthington.

The annual fellowship dinner will be at the Shelburne hotel Thursday evening after the golf tournament. E. M. Lyons, for many years president of the association, is chairman of the committee in charge of the dinner and entertainment. N. H. Weber is chairman of the reception committee.

PAB To Study Fuel Oil Prices

WASHINGTON, Aug. 30.—Because insufficient information was obtained at the recent hearing on fuel and heating oil prices, the Petroleum Administrative Board has launched its own investigation to determine whether prevailing prices are unreasonable, according to an announcement today by Administrator Ickes. The Board expects to report on its independent inquiry within a few days.

Remove the Hand of Bureaucracy

An Address by Axtell J. Byles, president of the American Petroleum Institute, at the presentation of Drake Memorial Park, August 27, 1934

THE pioneers to whom today we pay tribute were rugged individualists. Those of us who knew and loved them would deeply resent the application of that term in an opprobrious sense. What else, if not rugged individualism, could have ignored ease, risked life and fortune, taken victory and defeat with stoic courage, wrested from an unwilling and hostile nature one of her most dangerous and priceless possessions and subdued and harnessed it in the service of mankind.

Upon the rock of rugged individualism this nation was founded.

These rugged individualists conducted their affairs and ordered their lives with literal belief in the Declaration of Independence. They believed in the Jeffersonian maxim that people least governed are best governed.

The wealth and power of a mechanized age, however, brought complications in life and in government. The hard life became soft, ease engendered greed and abuse of privilege until, in tribulation, one wonders whether there is not something of a parallel between our present experience and that referred to by Lincoln in his second inaugural when he said: "Until every drop of blood drawn with the lash shall be paid by another drawn by the sword."

Federal Credit Our Bulwark

Whether or not we accept this rather mystic theory of retribution, we are likely to agree with Lincoln that this nation cannot exist half slave and half free. That democracy and autocracy or bureaucracy cannot live side by side or long breathe the same air. That no matter how wise or necessary drastic intervention and governmental control over the lives and business activities of our people may have been in the day of crisis, we cannot recover from the effects of the latter so long as the former exist.

We appeal to the administration to turn as soon as may be from an emergency government, which is necessarily largely one of discretion and fiat, and return to one of law—so that men may plan and order their affairs with assurance and confidence. It is my conviction that only in this way can the appalling strain upon the federal credit be relieved and private investment and initiative take up the load which it alone is able to carry.

Armed conflict between nations is a tragic and terrible thing, but the worst thing which can befall a people is anarchy. Parts of Europe are today so threatened. Our bulwark against chaos is the federal credit—at all cost it must be kept secure.

Judgments differ as to the policy which should be adopted by and for the petroleum industry upon the expiration of the National Industrial Recovery Act next year. Any present expression must, therefore, be largely one of individual opinion. Some of us do not believe in fairies or panaceas or economic magic, or in guaranteed profits or in price-fixing, or think that a series of rules embodying in one form or another the "Thou shalt's" and the "Thou shalt not's" will prove any more successful when applied to an industry such as ours than they did when applied to the liquor traffic.

A cynic once said that rules are made to be broken by men of brains. Unfortunately, our experience in the oil industry during the past year has indicated that most of our rules are broken by the un-cooperative to their own profit and to the detriment of those who desire to cooperate and do obey the rules. The game cannot be played that way. No government and no industry can afford to issue edicts or make rules which are flouted.

We must recognize petroleum as an essential and irreplaceable natural resource. It is burdened with a public interest insofar as prevention of waste, both physical and economic, is concerned. Otherwise, it is not unlike other industries.

An increasing number of people are realizing that it is impossible for a committee, or board, or authority to regulate, or mandate, or regiment the complex and endless operations of so vast an undertaking. If there were a single ownership, it could not be done efficiently. With multitudinous ownership and competing interests, the task is insuperable. This suggests that, beyond the supply of raw material, the hand of government should be removed and, in the public interest, competition as to price and quality and service begin.

Supply-and-Demand Balance

Some of us are still simple enough to believe that economic laws are inexorable. That if too much crude oil is not produced, too much gasoline and other products cannot be. That, as a result of such a balance, price will take care of itself. That the public's interest, both in conservation and price, may be safeguarded through governmental control of the volume of crude oil allowed to be produced. Most of us are agreed that failure to balance supply with consumer demand renders futile every other effort at stabilization. We cannot take the second or the fifth or the tenth step until we have taken the first. We have not yet succeeded in taking the first.

THE EDITORS' VIEWPOINT

Let the Industry Say as to the Code

By Warren C. Platt, Editor

OUR industry, very properly, can now sit down to study calmly and sanely the petroleum code, size it all up and see what, if anything, should be discarded and what retained.

When the code was first written the government representatives frankly said it was only a start to something that should lead to more employment and better business conditions. They said it was not to be considered in its initial form as sacred; that it was subject to change as experience dictated.

We have now had a year of the code and it has been changed and tinkered with constantly. Perhaps now is a good time to stand back and view it as a whole rather than to discuss where the comma should be in sub-paragraph G, of paragraph H, of Section 52, and so on. We should study it in the light of its two—and only two—main objectives. The first objective most of us have probably overlooked. It was to reemploy more people at a living wage or better. The second objective, which only was to make the first possible, was to improve business practices.

Most every industry hopped at once to this second supplemental objective as if it were the first consideration, with the result that we and every other industry, have gotten into a welter of business details, each man looking at his neighbor and seeing many ways in which he could improve him so that number one could make a profit.

One man thinks his neighbor should have his hair cut so, another that his eyebrows should be plucked, a third that he should wear sport pants with pleats at the waist, and so on for every article of his wearing apparel, his physical appearance, his habits, his conduct and even his thoughts.

No wonder we in the oil industry have a few hundred amendments and interpretations of our code as Judge Ames, president of The Texas Co. recently said in a speech calling on the oil industry to get back to fundamentals. If we don't stop our present methods, our neighbor is going to look like a plucked rooster, or a mangy alley cat, and the chill of winter is fast coming on.

In the heat of last summer we were all terribly patriotic and dragged out a lot of our schoolboy ideas—some of which we had not thought of since grammar school—and fought, sweat and almost died to get them in the code. We let a lot of men from outside the industry equally full of schoolboy ideas, talk forever in our meetings and help vote on all the ideas, the good as well as the bad, and whether they knew anything about the business or not.

Most every one got all worked up as at an old-time religious revival where common sense is checked at the door.

OUT of the welter and heat and the mess, if you will, came our industry's code. Much of the emotion continued in the further activities of the Planning and Co-ordination Committee until today we have the conglomerate of laws and rules and interpretations of them which do not interpret, to which Judge Ames referred and which, if he had been a bit less polite, he would have called a mess. It was also to these that President Byles of the American Petroleum Institute referred in his address at the Titusville Drake Jubilee Celebration, as getting far away from the fundamentals of law and common sense and practicability.

These two men, Messrs Ames and Byles, are not voicing these criticisms just as their own personal ideas. They have taken the trouble to find out that they represent the opinion of a considerable portion of the oil industry. Their criticism cannot and should not be lightly brushed aside.

There are plenty of other critics of the code, particularly of the manner of its enforcement or rather its unenforcement; plenty of critics of the

"New Deal" and of the growing bureaucracy at Washington.

We have our oil code all lighted up and burdened like a Christmas Tree. Most of the branches are about to break and those which do not break are quite likely to catch fire. We have just as varied a collection of stuff and junk in our code as we ordinarily put on a Christmas Tree. Now isn't it about the day after Christmas and time to take a lot of the stuff off the tree so it will last, at least, until New Years?

Most anywhere in the oil industry you hear men say that, if this, that or the other thing isn't done right now, they are going ahead regardless of violating the code simply because they have to in order to stay in business at all. Most of the industry has done a good job at adhering to the code but those who have not are forcing the industry at large to chuck the code overboard.

WASHINGTON has not played fair with the industry in not vigorously and immediately enforcing the code, or on the other hand, in telling the industry that it could not or would not undertake enforcement at all. Washington has twiddled its thumbs too long over its law books as to whether an act in intrastate commerce could be construed as an act in interstate commerce. Business has lost sales and profits to code violators.

One can sympathize with Washington in its predicament over this legal question, but neither the oil business nor any other business can, nor should, wait another day for any more thumb twiddling. Announcement is that Washington is proceeding to enforce the code but Washington will have to move a lot faster than it has in the past if it would keep its ship off the rocks, or avoid mutiny in the crew.

There is no doubt that, if Washington doesn't get a move on itself in code enforcement, individual companies are going to chuck over such portions of the code as are losing them money and let the high courts of the land decide, if necessary, whether Congress can enact a law, or any court make a decision, which will force a man to close up his business as a bankrupt when he has conducted it according to all the rules of business up to the coming of the "New Deal."

The average business has long since exhausted its reserves and its credit—hence it is foolish for the administration to talk about lending money to "sound" business concerns. This average business simply cannot pay out more money than it takes in. So, while Washington may be worrying about a "Red Revolt," what is more likely to take place right soon is a revolt of business for no man is going deliberately to run his business into bankruptcy, code or no code. Every man is going to fight to maintain his business and to pay his employes something, whether the code fixes a minimum or not. Frankly, we say the petroleum code is going to break down and right soon, not in its fundamentals, but as regards all the rigamarole with which it has been decorated.

Therefore is not this the time for a fair measuring of the value of the various parts of the code and for discarding that which is useless or hopeless of accomplishment and enforcement?

The P. & C. Committee has labored long and hard—and is entitled to the hearty thanks of the entire oil industry—but it is so close to its own work that one can well question whether it can value properly that work or any part of it.

Would it not be much to the point for a special committee (and how we hate committees, but there seems no way out this time) to be appointed to review the work of the P. & C. Committee and the code and recommend what should be kept and what thrown away? That committee should be truly representative of the industry, and it might have some outsiders on it, some college professors if you will, to help get a new point of view on the subject.

Let that committee go into session at once and and be instructed to report in 30 days or it automatically ceases to exist. Let it be made up of men who will put in their entire time on its work for that period if necessary.

While such a committee would not have any authority over the code or the P. & C. Committee, it nevertheless would exercise the great power of the industry's public opinion, even to such an extent that, if it should recommend a brand new P. & C. Committee at Washington, the present Committee undoubtedly would resign in a body.

SUCH a reviewing Committee should be appointed by the American Petroleum Institute but only after consulting and advising with other representative organizations within the industry. The Committee should be as small as possible and still be representative of the entire industry but it also should not be so big as to require an auditorium in which to meet.

Tremendous progress has been made in developing the big fundamental of the oil code, which is restriction of crude oil and refinery production to reasonable market demand. Many believe that if that end is successfully achieved there will be no need of all the marketing geegaws which have been hung on our Christmas Tree.

Please do not misunderstand that all in the marketing section of the code—the chief cause of complaint—is wrong. The vast amount of work and thought which has gone into it the past year has produced points of value, points which may not be of real value today but will be tomorrow, and which show the trend of marketing thinking. However, marketing is so intricate and deals so much with human idiosyncrasies, failings, and so on, rather than with the amount of heat and pressure inanimate steel will hold, that it is difficult if not even impossible to set up rules governing any number of these points and have them adhered to.

At all events a new start from that which has been found to be sound in the code the past year, should expedite the coming of some degree of prosperity to the oil industry and should do a far better job of it in much shorter time than is possible by continuing to hang tinsel and glass stars on our Christmas Tree.

Attempt to Stabilize West Coast Gasoline Prices Unsuccessful

By Jack N. Westsmith
N. P. N. Staff Writer

LOS ANGELES, Sept. 1 MAJOR California refiners made an unsuccessful attempt Aug. 31 to restore gasoline prices to what they considered normal parities in sections of Pacific Coast territory.

Standard Oil Co. of California initiated the readjustment by announcing a reduction of one cent a gallon in wholesale and retail prices of all grades of gasoline in northern California, Oregon and Washington, and an advance of 0.5 cent in southern California and Arizona.

Shell Oil Co., The Texas Co., Union Oil Co., and Richfield Oil Co. promptly followed Standard's lead. General Petroleum Corp. and Associated Oil Co., together with the secondary companies and independent refiners, however, failed to meet the advances.

Faced with inevitable large losses in gallonage over the week end and the Labor Day holiday if their products were not on a competitive price basis, Standard and companies acting in concert with it were forced on Sept. 1 to reduce all prices to former levels in southern California.

Both General Petroleum and Associated have particularly strong marketing affiliates through which they sell a large part of their output in keen competition with the products of independent refiners. Neither the two major companies nor their affiliates would be willing to increase their prices in southern California, unless assured that their independent competitors would also advance, and no assurance of this kind was forthcoming.

Independent refiners, in fact, were believed to object to the readjustments on the grounds that the price changes would tend to restrict their sales in southern California and would act as a severe handicap to the sale of independent products in northern California and the northwestern states.

Some marketing officials were of the opinion that the readjustments were not unconnected with the threatened invasion of gasoline from East Texas. They viewed the changes as strategic moves to protect the stability of Pacific Coast markets. The argument was that wholesale and retail markets in southern California appear to be fairly well stabilized and in good shape to stand a moderate advance. Comparatively few independent refiners or distributors in this area are operating outside the Agency agreement and these few are either supporting the Agency policy or are relatively unimportant in output.

IN STRONG contrast to this favorable situation in southern California, disturbed marketing conditions existed in large sections of the northern part of the state, as well as in Oregon and Washington, making realignment of prices at a lower level necessary.

The Papoose, carrying about 3,000,000 gallons of Texas gasoline and now held at Tacoma, awaiting decision as to its right to unload at that port, has made a number of previous trips to this territory, with similar cargoes. The last trip, made several months ago, resulted in a break-down of the market. Seriousness of the threat to market stability offered by the cargo of this tanker is shown by the fact that it represents approximately 10 per cent of the average monthly sales of gasoline in Washington and Oregon combined.

If the Papoose should succeed in unloading its cargo at Tacoma, the way would be made easy for the entry of the Republic and other tankers reported to be headed for the same port, with cargoes of East Texas gasoline.

Washington state officials are reported to favor the entry of Gulf Coast gasoline on the ground it would tend to bring prices to what they consider reasonable levels. Readjustments of petroleum prices made by major companies on Aug. 31 would be a concession to that view and, possibly, the changes were made for that purpose.

If the cargo of the Papoose is denied entrance into any Washington port, the supposition has been it would seek entry into British Columbia. Marketing companies of that province, however, are reported to be unwilling to purchase it as their needs are fully supplied and they have no available storage for it.

Two Infringement Suits Filed by Universal

CHICAGO, Aug. 30, 1934.—Cracking patent infringement is charged in suits recently filed by Universal Oil Products Co. against J. J. & M. Taxman Refining Co. and Dansiger Refineries, Inc. Both suits were filed in the northern Texas district.

The Danciger company has a refinery at Pampa and the Taxman company at Wichita Falls.

The Taxman suit is based on Patents No. 1,392,629 and No. 1,537,593, which were sustained by Judge Nields at Wilmington in the suit of Universal against Root Refining Co., and on No. 1,890,974.

The same two patents, which cover clean circulation and "two-coil" operation, are the basis of the suit against Danciger, together with three others, No. 1,890,974, No. 1,658,415, and reissue patent No. 18,899.

N. D. Stabilization Meetings

FARGO, N. D., Sept. 4.—Four retail price stabilization committee meetings are to be held this week in North Dakota. The schedule is for a meeting Sept. 4 in Wahpeton, Sept. 5 in Fargo, Sept. 6 in Grand Forks, and Sept. 7 in Langdon.

Orders Approved as Part Of Buying Program

WASHINGTON, Aug. 30.—Approval of two orders which form part of the plan for extending the East Texas gasoline buying program, now before him for consideration, was announced today by Administrator Ickes.

One gives the refinery allocating agencies the authority to require that all gasoline be made from legally produced crude oil. It specifically requires that all gasoline produced under allocation orders be from crude legally imported into the U. S., or withdrawn from storage under lawful orders, or from crude produced in accordance with quotas established under the code and in accordance with orders of state agencies.

The second order approved by Ickes authorizes the district allocators to require two monthly reports from individual refineries. One is to be filed on the 4th of each month, in order that the information may be available for fixing gasoline quotas for the following month. The second is to be available by the 10th of the month, giving as much detailed information as to receipts at refineries and terminals, shipments and stocks as may be required.

The report to be filed by the 4th calls for the refinery to present its suggestion for its gasoline quota for the following month for each plant and statements as to the quantity of crude and its products the refinery expects to have available, from lawful sources, from which to produce its quota of gasoline.

The statement to be filed by the 10th may require the amount of crude actually run or purchased the preceding month; a description of leases, and their ownership, from which crude was produced; names of brokers from whom crude was purchased and the amounts; methods of transportation of crude from lease tanks to refinery and ownership of pipelines, if such were used.

There may be incorporated in the second report also any or all the information suggested in 45 listed items. These cover receipts and shipments of gasoline, under all conditions and detail of stocks.

(The official text of the two orders is published on p. 68 of this issue).

Offers Price Control Plan to Refiners

WASHINGTON, Aug. 31.—That independent refiners determine upon a fair minimum cost for gasoline and agree among themselves not to sell below that figure, was proposed to I. A. O'Shaughnessy, Globe Oil & Refining Co., at a conference with the Petroleum Administrative Board, according to reports in oil circles last night. Mr. O'Shaughnessy is a member of the Planning and Coordination Committee.

He came here Aug. 30 as representative of a group of independent refiners who met earlier in the week at Kansas City. They telegraphed Administrator Ickes urging that something be done to bring gasoline tank car prices into closer relationship with crude oil prices.

The group pointed out that, through concerted action by the oil administration and the larger purchasing companies, the price of crude was virtually pegged at around $1 a barrel a year ago.

They said that the non-integrated refiner was given to understand that he would be protected by the fixing of minimum prices or otherwise, but so far no relief has been forthcoming. The group urged Administrator Ickes to fix minimum prices in affected areas, as was recommended by the P. and C. Committee more than a month ago.

They also protested the policy of some major companies of guaranteeing retail margins. Margins for the refiner, jobber and retailer, they contended, should be competitively fixed, on a basis where each factor involved will have an equal interest in maintaining the normality of markets. If any factor should destroy the normality of the market that factor should be penalized by a reduction in margin.

Even though the current proposal for extending the East Texas buying program succeeds, the group feels that Ickes should fix prices in affected areas for a 90-day period until the stabilization plan takes effect. Unless some relief is provided soon for the independent refiner, they said, a break in the crude price structure seems in prospect.

The Board is understood to have been rather cool to the group's price-fixing proposal.

While Mr. O'Shaughnessy was represented as viewing the plan reputedly suggested by the PAB as impracticable, it is understood that he will submit it to the group of refiners he represents. He left the night of Aug. 30 for Chicago.

Ickes Recounts Benefits Of First Year of Code

WASHINGTON, Sept. 3.—The second year under the Oil Code began Sept. 2, with the fundamentals of recovery well marshalled and the full benefit of the work not yet felt, according to a report of Administrator Ickes on the progress of the past year.

More effective methods of administration through additional authority will be sought by the recommendation of legislation to the new Congress, he stated. That there is promise of attaining true conservation and sound economic stability, along with just standards of fair competition, is claimed by Ickes.

A continued victory in litigation (now in Supreme Court) on the validity of acts of the Petroleum Administrative Board was predicted, and with it the elimination of "hot oil" in the coming year. The promise of continued efforts to stop or prevent price wars was promised in the report.

Scientific development of new reserves was included in the program of the past year, the oil administrator reported and consideration was given to 400 plans for development of newly discovered fields, 300 being ap-

proved. Plans approved thus far provide for efficient well-spacing and a reasonable rate of drilling.

Attempts to balance refinery production with gasoline needs were also reported as progressing.

Gains in prices were attributed to the work of the Administration. Crude oil increased from 30 to 50 cent levels to 90 cents and $1 a barrel. The average price of gasoline in 50 cities went from 12.76 cents in 1933 to 13.90 cents a gallon in the first six months of 1934, it was pointed out. The cost of increased wages and the hiring of additional men was upward of $100,000,000 a year, said Ickes' report.

Unforeseen questions and problems on code administration have been handled by the issuance of 290 orders, modifications, regulations, and so on, of which the majority have dealt with production, stated the report.

Kent May Move Refinery To Grand Haven

GRAND RAPIDS, Aug. 31.—Kent Refining Co. will probably move its plant from its present location in Grand Rapids to a less central location in some smaller town nearby, if present plans are finally decided upon, J. B. Ryan, fuel oil sales manager, stated today. Its present site offers no reasonable chance for expansion, Ryan says, and better facilities are available elsewhere.

Several towns have made offers to the plant to induce the company to move. Grand Haven appears to be the best opportunity so far offered, and a decision will be reached this week, Ryan says.

The plant tops about 300 to 500 barrels per day at present. Plans are on foot to expand its capacity to 1000 barrels or more, if and when the move is made.

The officers of the company are: J. J. Kerins, president and treasurer; G. H. Gruesback, vice-president; H. O. Butler, secretary; and J. B. Ryan, sales.

Oil Companies Report Operating Loss in Arbitration Hearings

CLEVELAND, Sept. 5.—Taking the stand in the current gasoline station operators' union and major oil companies' strike arbitration here, a major company official testified that the trend in earnings had steadily declined during the past three years as operating costs mounted. Net loss in 1933 was 2.53 cents per gallon for ten companies operating 580 stations which sold 52,936,603 gallons of gasoline. Gross profit for these companies amounted to 7.1 cents per gallon while total expenses were 9.63 cents per gallon.

In 1932, a loss of 1.81 cents per gallon was suffered by nine companies operating 521 stations and selling 54,985,757 gallons. Gross profit was 7.3 cents per gallon while expenses were 9.11 cents. In 1931 a loss of 0.94 cent was experienced by 9 companies operating 553 stations which sold 62,640,327 gallons. Gross profit was 7.9 and expenses 8.84 cents per gallon.

Present salary cost figures, based on March 1934, show that 13 companies with 583 stations, each with manager, plus a personnel list of 1146 operators, are paying an average of 3.72 cents per gallon for payrolls on a 48-hour week basis. Should the union demands for higher wages be granted on the same hour basis, costs would average 5.98 cents per gallon. The 40-hour week demands total a payment of 7.06 cents average for payroll costs per gallon.

In percentage figures, the wage increases for the 40-hour week at salaried stations amounts to 75.7 per cent minus clauses for sick leave and uniform care. With these two items included, the percentage of increase goes to 85.1 per cent above present levels.

Combining salaried and commission stations, union wage requests would elevate the present scale 79.7 per cent, minus the sick leave and uniform care clauses. These features included, the increase rises to 89.4 per cent. There are 121 commission stations listed which would have to stand an 86.6 per cent increase for the 40-hour week.

Demands for a 48-hour week are lower. Salary increases for the two groups totals 52.1 per cent. With sick leave and uniform items granted the figure jumps to 60.2 per cent. The number of operators needed under a 40-hour week would total 1491 for the 583 stations as against the current 1146 now employed.

During the past week various witnesses have testified upon the stand. Four station operators told of the financial difficulties they have encountered because of the low wage scale. Existence was precarious and lacking in any opportunity to enjoy even the most meager of life's pleasures.

Company surveys were presented to show that work at a station was not grueling or hazardous. A report showed that an operator actually worked no more than 27.3 minutes an hour during the winter and 31.8 minutes during the summer. Statistics from the Ohio State Industrial Commission which gave 256 industries, exclusive of the oil distributing companies, paid a premium of $3.07 per $100 pay roll. The oil companies paid but $1.60 per $100 pay roll. The number of accidents in marketing gasoline per 1,000,000 working hours is 8.96 days lost or only 0.82 day per 1000 working hours.

The hearing is entering last stages and should reach a conclusion within the next ten days.

The drouth added a profitable line to the business of one alert station operator.

Putting on showmanship at the air standard.

These and others in the instalment of Merchandising at Stations, Pgs. 38 and 40 this issue.

New Injunctions Confuse East Texas Situation

TULSA, Sept. 5.—Entrance of another district judge of Travis county, Texas, into the battle of injunctions Wednesday helped confuse the East Texas situation. The railroad commission obtained the latest batch of orders restraining refiners from shipping crude or products without approved tenders from the commission. These tenders would certify that the oil had been legally produced. Nineteen injunctions were issued making a total of 31 the state had obtained.

Reports from the commission's field office in Kilgore were that the situation was greatly improved. There was a fresh outbreak of shipping by rail last Friday when 682 cars moved without tenders. On that day the railroads issued instructions to agents to accept interstate shipments without restrictions other than the filing by the shipper of the federal affidavit provided by the oil administration.

This form was merely a declaration that the owner or agent of the products was shipping to some one else and for enforcement purposes was meaningless. Railroad agents were required to note on the waybill and bill of lading of interstate shipments that the shipment would not be diverted to intrastate points. As to intrastate shipments, railroads instructed their agents to require permits issued by the state commission.

While these instructions had not been formally rescinded or changed, Capt. E. N. Stanley, in charge of enforcement for the railroad commission, said Wednesday that the carriers were co-operating and were refusing shipments unless tenders were filed. He said the biggest task, in enforcement now is the stopping of trucks hauling gasoline made from "hot" oil.

While the commission's order requires approved tenders on trucked gasoline, the job of running them down on the highways is a huge one. Little of this material goes outside the state but the volume in the state is so great as to keep the markets in east, central and south Texas continually upset.

It is expected that a revised federal form will be issued shortly. This will carry the declaration of the shipper that the oil or products offered for interstate shipment has been produced in accordance with the rules of the state commission.

Eason Well is Gusher

By Teletype

TULSA, Sept. 5.—The well of the Eason Oil Co., in the Crescent pool of Oklahoma on which Administrator Ickes is seeking an injunction was drilled into the Wilcox sand Monday and in two hours made 2220 barrels.

The suit is a test of the oil code requiring that new pools be developed in accordance with a plan approved by the Administrator. The approved plan for Crescent calls for one well to each 40 acres. The Eason well was drilled on a 10-acre location.

Crude Stocks Continue Rapid Decline

WASHINGTON, Aug. 31.—Stocks of foreign and domestic crude oil dropped 1,818,000 barrels during the week ended Aug. 25, according to the official report today. This represents a total decrease of 4,671,000 barrels the last three weeks.

Total stocks Aug. 25 were 336,944,000 barrels. Of the decrease during the week, domestic oils accounted for 1,551,000 barrels.

Grade of Crude	Stocks held by reporting companies Aug. 18 (Thousands of Barrels)	Aug. 25	Change from Aug. 18
Penna. grade	4,743	4,684	— 59
Other Appal., incl. Ky.	1,163	1,137	— 26
Lima-N. E. Ind.-Mich.	1,419	1,438	+ 19
Ill.-S. W. Ind.	11,378	11,523	+ 145
N. La. and Ark.	10,280	10,158	— 122
W. Tex. and S. E. N. Mex.	29,750	29,399	— 351
East Texas	37,651	37,107	— 544
Other Mid-Cont.	159,762	159,593	— 169
Gulf Coast	17,359	17,703	+ 344
Rocky Mountain	27,770	27,022	— 748
California	34,386	34,346	— 40
Total domestic	335,661	334,110	—1,551
Foreign crude	3,101	2,834	— 267
Total crude	338,762	336,944	—1,818

Charges Importers Exceed Quota Set by Ickes

TULSA, Sept. 1.—Oil importers have been consistent violators of the order of Oil Administrator Ickes limiting imports to the average of the last six months of 1932 according to a compilation prepared by Harold B. Fell, executive vice-president of the Independent Petroleum Association of America.

The data has been turned over to the Planning & Co-ordination Committee at Washington with a request for action.

Mr. Fell found that the excess imports in the first half of 1934 averaged 30,356 barrels daily. In June the excess was 82,610 barrels daily and in July, 11,000 barrels.

"The federal government has a more direct control over imports than it can have over domestic production," Mr. Fell wrote in discussing his figures. "More accurate statistics regarding imports are available than can be obtained concerning domestic production. Petroleum or its products cannot easily be smuggled into the country. There is no suggestion that such smuggling has been or is being attempted.

"Since these imports enter openly and are officially recorded, it is evident that they can be held down to whatever amount may be desired by the federal government. The control of oil imports can be more complete than any control of domestic production.

"Since it is clearly apparent that the imports have not been held to the terms of the order of the oil administrator and that the entire import situation needs clarification, we believe that it is quite proper that a careful study of the situation should be made in order to determine the facts and in order that a definite program for the future might be adopted promptly and enforced," he said.

CHICAGO, Sept. 5. — The Ohio Code Committee will meet Sept. 21 at 10 A.M. at Cleveland.

Capital's Gasoline War Ends, Prices Back Up

WASHINGTON, Aug. 31.—Washington's gasoline price war ended today. Retail prices were back to 13.8 and 12.8 cents exclusive of tax for branded regular and unbranded, respectively, which were the prevailing postings before the outbreak of price-cutting nearly three weeks ago.

Prices dropped to 9 and 7 cents, respectively, about two weeks ago and remained there until yesterday noon, when the unbranded dealers went up. Branded prices followed this morning.

Renewal of the local price war came after three months' operation of the "peace plan" which permitted a 1-cent differential on unbranded gasoline. The new outbreak, according to consensus of the trade, was occasioned by under-the-canopy cutting.

Charges were made that some unbranded dealers were financing their part of the war by withholding gas taxes.

Negotiation of the settlement was due to activity of the local code committee of which L. S. Scott, independent jobber and station operator, is chairman. The federal oil administration had no hand in it, so far as is known.

Mr. Scott kept the newspapers advised of developments. It was emphasized that the low prices were only temporary and that, in some cases at least, they were below cost. The newspapers cooperated by presenting the industry's side, although at the outset the consumer's angle was featured. When the expected restoration of prices occurred, there was little reaction.

Municipal authorities have launched an investigation to determine whether there is need for strengthening laws concerning the collection of gasoline taxes.

Stabilize Iowa Prices

By Teletype

CHICAGO, Sept. 5.—Normal retail gasoline prices are being restored in Iowa beginning today as result of efforts of the Stabilization Committee it is reported here. It is expected that with the exception of three or four points the entire state will be on the stabilization basis soon. About 70 per cent of towns in the state have been normal.

Committee Meets to Plan New Buying Program

WASHINGTON, Sept. 5.—While Administrator Ickes has not yet announced approval of the plan for extending the East Texas buying movement to all areas east of the Rocky Mountains, the program committee, which will manage the plan, is meeting here this afternoon to complete details for putting it into operation within the next few days.

Apparently, the committee has received assurances that the administrator will very shortly announce formal approval of this stabilization effort which calls for purchase by the major companies of 1,258,000 bbls. of surplus gasoline each month from smaller refiners.

Kentucky Oil Jobbers Meet Sept. 11-12

LOUISVILLE—Four trophies and 14 prizes are the rewards for excellent golf dangling before oil men attending the annual convention of the Kentucky Petroleum Marketers Association Sept. 11 and 12 at Louisville.

Golf will begin at 10 a.m. Sept. 11, on the Greenfields Country Club course, 15 miles east of Louisville on the Ohio river. Trophies and prizes will be awarded at the association luncheon Sept. 12.

The first day of the convention will be given entirely to golf.

The association will hold its formal sessions at the Brown hotel Sept. 12, and the Kentucky state code committee will hold its meeting Sept. 13.

McClanahan May Build Michigan Refinery

MT. PLEASANT, Mich. Aug. 30.—Rumors are current that the McClanahan Oil Co. of Alma and Detroit, headed by Walter McClanahan, well known Michigan oil producer, will build a refinery near either Wheeler or Breckenridge, in the eastern Michigan producing area, in the near future. It is understood that estimates have been obtained from one or more engineering firms.

A number of small refineries are projected in various points in Michigan, to operate on local crude, which finds some difficulty in reaching an outlet under conditions of curtailed refinery production and a surplus of crude from other fields.

Salesmen Ask Support For 'Code' Stations

GRAND ISLAND, NEB.—Service station employes in Grand Island, Neb., purchased a half-page space in a recent issue of the local newspaper asking motorists to support stations that comply with the petroleum code.

The plea was made to patronize stations that observe code hours and wages so that employes may retain their jobs. The advertisement read:

"We want work, not charity. Our employers will keep us at work and can add additional employes if—you, the buying public patronize only those service stations complying with the petroleum code.

"By buying from these code complying stations you make it possible for our employers to make a fair profit and they pledge themselves to pay code wages and work us code hours.

"This advertisement is sponsored by the employes of the Hall county retail gasoline outlets complying with the petroleum code.

"It is easy to identify us—just ask us if we are being paid code wages and are working code hours."

Some of the test cars used in the Uniontown tests. Drivers and observers covered an average of over 200 miles per day in these cars, and used 2516 gallons of test and reference fuels. A total of 19 cars were used, including the 1934 models of 13 different makes

Seven New Features in 50,000-Mile Uniontown Anti-knock Tests

CLEVELAND, Sept. 4

SEVEN new features were included in the co-operative anti-knock road tests conducted at Uniontown, Pa., by the automotive and oil industries in August, under the auspices of the Detonation Subcommittee of the Co-operative Fuel Research Committee, according to C. B. Veal, research manager of the Society of Automotive Engineers. Test cars ran 50,000 miles in the course of the program.

New features of this second series of co-operative road tests not included in the similar project two years ago were: (1) Level road tests; (2) "blind tests"; (3) investigation of the effect of the type of reference fuel on road knock ratings; (4) variation in spark settings; (5) blending of non-knocking test fuels with a low octane gasoline to obtain a rating by extrapolation; (6) observations with the "electric ear"; (7) high speed cross-country runs.

The object of the tests was: (1) To check the validity of correlation between road knock ratings and laboratory knock ratings; (2) to indicate the path of research aimed at adapting fuels and engines to better advantage.

The 41 men forming the permanent personnel of the test corps were divided into five groups: (1) Observers for making knock ratings; (2) drivers of the test cars; (3) fuel blenders; (4) maintenance mechanics and (5) the Operations Committee itself, which made assignments and plotted the data as it became available.

THE supply of test fuels included seven commercial branded fuels and nine unbranded fuels chosen to represent various types. The nine unbranded fuels included liquid and vapor phase cracked gasolines of 68 and 70 octane number, straight-run California gasoline of 71 octane number, blends of cracked gasolines down to 65 octane with reference fuels and up to 70 octane with lead, a 75 octane number blend and a benzol blend of 70 octane number. Reference fuels C-8 and A-3 of the Standard Oil Co. of New Jersey were used in making various blends.

In practice, each observer recorded his ratings on the Log Sheet shown in Fig. 1. He determined for the test fuel the degree of knock—heavy, medium, light, trace or zero—at speed increments of 5 m.p.h., and then ascertained what blends of the reference fuels C-8 and A-3 would be required in the car being used, to give, first, a slightly heavier knock than that produced by the test fuel, and second, a slightly lighter knock. The rating of the test fuel expressed as the per cent of C-8 in A-3 would lie between these two. As is shown on the Log Sheet, not only the test conditions and engine adjustments were noted for each run, but also the atmospheric conditions, full weather reports being kept.

These data were turned into the group in charge of charting and analysis, which functioned continuously and kept pace with the test determinations in its work. Two types of cumulative chart were prepared. One of these, shown in Fig. 2, incorporated all the findings for all the branded fuels in one particular car. These were known as "Framework Charts" because the knock ratings at various speeds for the *standard* blends of reference fuel were first

charted on them, as shown by the dotted lines in the fictitious examples given.

In the second type of cumulative chart the ratings for an individual fuel in all cars were shown. At least two determinations and sometimes three were made for each fuel in each car.

One variation from standard procedure was the change in the degree of spark advance from the basic factory spark setting. Additional rules or changes in standard procedure were adopted for three reasons: First, to increase the accuracy of results; second, to secure knock where no knock was obtainable with the use of the standard procedure; and third, to ascertain whether the hill test represented conditions more or less severe than those encountered in actual service.

Another innovation was the practice of running certain tests "blind," particularly on the level road, where acceleration is more rapid and readings therefore more difficult to obtain. In such cases the identity of both reference and test fuels was concealed so that the observer would not unconsciously be prejudiced in advance by his knowledge of the reference fuels' characteristic behavior.

Failure to secure knock under the test conditions constituted a problem calling for solution. Two expedients were tried to obtain ratings when this occurred. First, the spark was advanced beyond the basic factory spark setting, but in all cases maintained within reasonable and practical limits of the spark advance for maximum power. In the cases of alterations in the spark setting, specific notation was made on the log sheets of the run. A second method was to blend the non-knocking fuel with a low-octane gasoline and to obtain a rating for the blend.

The percentage of the high-octane gasoline was never less than 60. A curve was then plotted showing the knock rating vs. composition, and the curve extrapolated to indicate the approximate rating of the high-antiknock fuel. However, even when both of these alterations in procedure were tried, certain cars could not be made to knock under any conditions. The rule requiring a rating to be made for every fuel with every car was therefore altered to a requirement for such rating with at least 15 cars.

To check the severity of the hill test and to carry out the provisions of the program for acceleration tests on level road and at high speed, two additional types of procedure were worked out. For the level road ratings, which were thought to represent milder conditions than those of the hill test, a convenient course was laid out.

For the tests at high speed specified in the program, cross-country runs were made, including both the negotiation of the hills characteristic of that part of the country and level road running. Such tests at sustained high speed represented conditions of greater severity than those encountered on the Uniontown hill.

The Test Corps examined the possibilities of the so-called "electric ear," a detonation meter consisting of a condenser type microphone, suspended under the hood, to pick up the knock which was intensified by

The Operations Committee which directed the Uniontown Test Project. Starting with the man with the pipe, they are: R. Stansfield, Anglo-Persian Oil Co., London; C. B. Kass, Standard Oil Development Co.; A. B. Wilder, Pure Oil Co.; Miss Geneva Prato, acting secretary of the committee; C. B. Veal, research manager of the Society of Automotive Engineers; W. M. Holaday, Standard Oil Co. (Ind.); H. W. Best, Yale University; J. M. Campbell, General Motors Corp.; Gilbert Way, Chrysler Corp.; and (with his back to camera) L. E. Hebl, Shell Petroleum Corp.

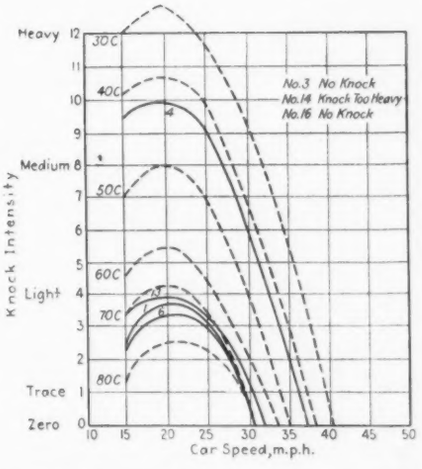


Fig. 2—Sample of Cumulative Chart Incorporating all Findings for all Branded Fuels in One Particular Car

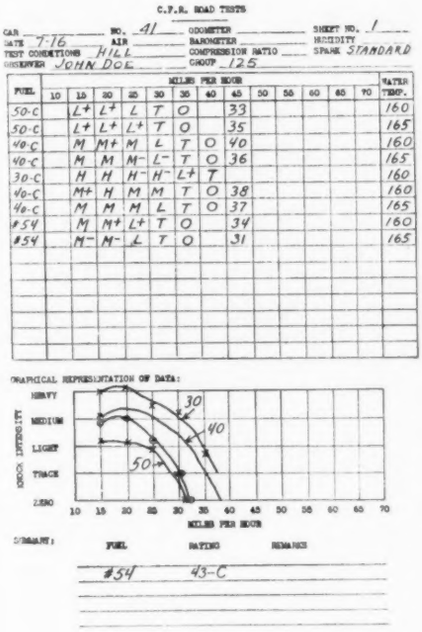


Fig. 1—Log Sheet on which Each Observer Recorded His Ratings

audio - amplification; suitable filters to eliminate the greater portion of the mechanical noises; a volume control used to suppress the knock coming through the instrument; and a set of ear phones attached to the output side for the use of the observer. Readings of a volume control dial, calibrated in decibels and so adjusted as to eliminate the knock on the output side, gave the intensity of the knock.

Chemical Society to Hear New Data On Anti-Knock and Gum Problems

CLEVELAND, Sept. 4

AN INTERESTING and valuable chapter will be added to the remarkable work of the Petroleum Division of the American Chemical Society Sept. 11 and 12, when that body meets in semi-annual conclave here next week. Two days will be filled with the most recent developments in research and experimental work on current petroleum refining problems.

T. A. Boyd and collaborators will add another article to the valuable series they have contributed during the last two or three years, on "Knocking Characteristics of Hydrocarbons."

Previous articles in this series have studied the relationship between molecular structure of hydrocarbons and ther knock tendencies; the variation in knock tendencies between different hydrocarbon families, and other principles governing the anti-detonation properties of light hydrocarbon of the motor fuel range. The new article will throw considerable light on the nature of motor fuels and the effect of these properties on the behavior of the fuel in the automotive engine.

Gum inhibitors for use of cracked gasolines have been for some time the savior of the refiner in reduction of refining costs and in saving anti-knock properties to produce a higher anti-knock motor fuel. Gustav Egloff, J. S. Morrell, and collaborators will discuss at the Tuesday meeting the relationship between oxidation potential, induction period, and storage stability of gasolines, and the application of inhibitors as a solution of the problem of prevention of gum formation. They have found that a motor fuel with 230 minutes induction period, but low initial gum formation will not produce excessive gum in fifteen months' storage. A gasoline with high initial gum, but with 245 minutes induction period still showed a short period free from gum, in storage.

The same laboratory will give a report on the findings of the effect of alkyldisulfides on the color stability of gasolines in storage. It has been found, they report, that color instability in plumbite-sweetened gasoline is due both to the disulfides formed during the reaction of sweetening the distillate, and to the excess free sulfur added during the process.

Distillation equipment, specific heats of hydrocarbons, the isolation of pure hydrocarbons from petroleum fractions, are among the other topics to be presented at the meeting.

The detailed program is as follows:

Sept. 11

9:00—1. Joseph D. White and F. W. Rose, Jr. The Isolation of a Nonanaphthene from an Oklahoma Petroleum.

9:30—2. R. T. Leslie. The Critical Solution Temperatures of Some Hydrocarbons in Sulfur Dioxide.

10:00—3. Wheeler G. Lovell, John M. Campbell, and T. A. Boyd. Knocking Characteristics of Hydrocarbons.

10:45—4. C. G. Dryer, J. C. Morrell, Gustav Egloff, and C. D. Lowry, Jr. Inhibitors in Cracked Gasoline. III. Storage Stability as Related to Induction Period and Critical Oxidation Potential.

11:15—5. Gustav Egloff, J. C. Morrell, W. L. Benedict, and Charles Wirth, III. The Effect of Alkyldisulfides on the Color Stability of Gasolines.

2:00—6. W. E. Kuhn and J. F. Collins, Jr. The Deterioration of Absorption Oils in Service.

2:40—7. Ogden FitzSimons and E. W. Thiele. The Molecular Weight of Cracked Distillates.

3:10—8. W. B. McCluer and M. R. Fenske. A Method for Evaluating the Viscosity Temperature Characteristics of Oils.

3:40—9. L. P. Gaucher. The Specific Heat of Liquid Pure Hydrocarbons and Petroleum Fractions.

Sept. 12

9:00—10. C. O. Tongberg, D. Quiggle, and M. R. Fenske. Efficient Small-Scale Fractionating Equipment.

9:30—11. K. M. Watson and Charles Wirth, III. An Apparatus and Conversion Chart for the Routine High-Vacuum Distillation of Oils.

10:00—Annual Business Meeting. Election of Officers.

Head of A. Y. McDonald Co. Dies

CLEVELAND—John M. McDonald, president of A. Y. McDonald Mfg. Co., Dubuque, Ia., died Aug. 4. Mr. McDonald was a pioneer in the manufacture of swing joints and other bulk station equipment, following in the footsteps of his father, a pioneer resident, who established the business in Dubuque in 1854. He became president of the company in 1923 at the death of his brother, A. Y. McDonald, Jr.

In 1900 the U. S. Government commissioned Mr. McDonald to take charge of the Manufacturers' Exhibit at the Paris Exposition. Surviving him are his widow, two married daughters and two sons, both actively associated in the McDonald company.

Protests Wage Differentials

LOS ANGELES, Aug. 31.—The Oil Producers Sales Agency of California again has protested the wage differential order of Oil Administrator Ickes. The agency submitted data to show that wages paid in California are higher than in other sections.

Code Committee to Meet

FARGO, N. D., Sept. 4.—The North Dakota state code committee will meet Sept. 26 in the Gladstone hotel, Jamestown.

First Large S-N Dewaxing Plant Operating At Port Jerome

AT THE recent inauguration of the new Standard Oil Refinery at Port-Jerome—the largest refinery in France—the S-N Dewaxing plant attracted particular attention. It is the first large commercial plant of its kind put into operation, and the result obtained in actual service have surpassed expectations.

As is well known, the S-N (Separator - Nobel) dewaxing process uses tri-chlorethylene as a solvent, and, in consequence, the centrifugal separators discharge the wax as the lighter, and the oil-tri blend as the heavier, component. The efficiency and economy in operation thus obtained are strikingly illustrated by the following figures from Port-Jerome:

Type of oil	Motor Oil I	Motor oil II	Cylinder oil
Dilution, oil: tri by vol.	54 : 46	52.5 : 47.5	54 : 46
Chilling temperature	—25°C. (—13°F.)	—25°C. (—13°F.)	—22°C. (—8°F.)
Throughput of each centrifuge, dewaxed, clay-finished oil, lit/hour	540	675	700
bbls./24 hours	81	100	105
Pour point of dewaxed oil	—21°C./—6°F./	—11°C./—12°F./	—9°C./16°F./
Cloud point of dewaxed oil	—19°C./—2°F./	—8°C./17.5°F./	Not determined
Yield of finished oil, ½ by vol.	95	95.5	97.2

The comparatively small difference between chilling temperature and pour point of the first motor oil is noteworthy and also the slight difference between pour point and cloud point.

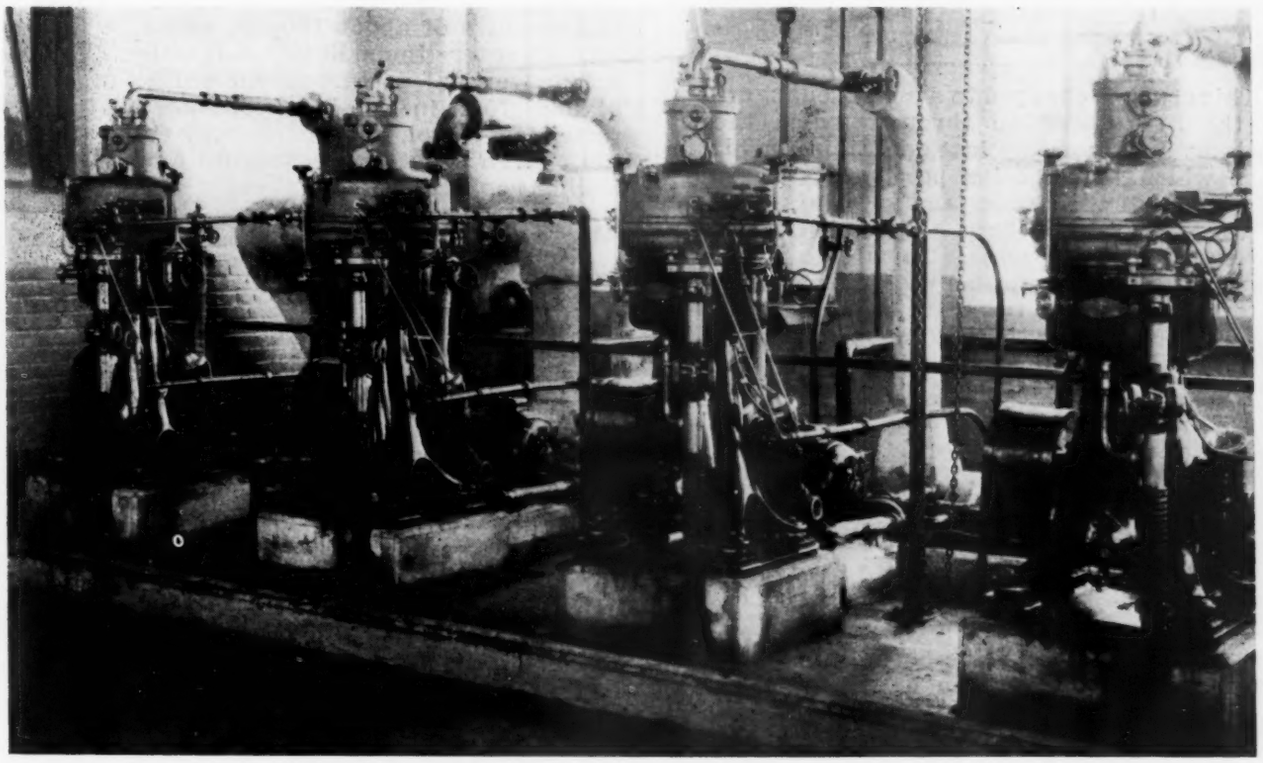
The above results were obtained during continuous runs for several days and nights, and since they exceled the guarantees with an ample margin, the plant was definitely accepted and has now been in successful continuous operation for more than 2 months.

It is interesting to note that although the wax is of typical crystalline structure, it is easily and continuously discharged from the centrifugal bowl, the machines having been run continuously without any cleaning of the bowls, until each batch of oil has been finished, i.e. up to 150 hours without interruption.

This feature is due chiefly to the use of tri-chlorethylene as a diluent, seeing that the wax is discharged from the center of the centrifugal bowl as the lighter component as already mentioned.

Besides 6 De Laval S-N Centrifugal Separators, as shown in the illustration, the dewaxing plant comprises proportioning and mixing equipment for oil and tri-chlorethylene, a refrigerating plant with continuous chillers and distilling equipment for recovering the tri from the oil and wax. The losses of tri are limited to a fraction of a per cent of the quantity of oil treated.

The refrigerating plant has a capacity of about 120,000 kilogram calories per hour, which has proved amply sufficient for the 6 S-N separators, the total output of which amounts to 500-630 barrels of dewaxed oil per day. The operating costs per unit of finished oil are thus very low, which is due to the comparatively low degree of dilution and rapid chilling characterizing the S-N-tri method of dewaxing.

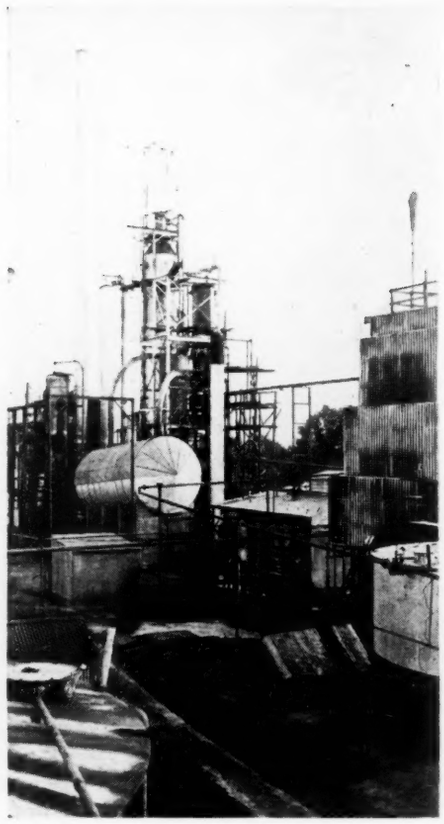


Installation of four S-N trichlorethylene dewaxing centrifuges at the Port Jerome, France, refinery owned jointly by Standard Oil Co. of New Jersey, Atlantic Refining Co. and The Texas Co. This is the first large commercial unit of this process installed in the world

Wasatch Combines Reforming With Skimming In Utah Refinery

by

John C. Albright



Skimming - reforming refinery of Wasatch Oil Refining Co. at Woods Cross, near Salt Lake City, operating on Panhandle crude shipped via tank car

WASATCH OIL REFINING CO., one of the two manufacturers of petroleum products in Salt Lake City, Utah, is processing crude oil shipped from the Panhandle of Texas by tank car. The allocation of this refinery is about 1500 barrels daily, charged to a unit which combines skimming and reforming to produce a higher octane gasoline than ordinarily derived from the crude by ordinary topping. The crude is produced from Gray and Carson Counties and has the following characteristics:

Gravity,	41.2° A. P. I.
Basic Sediment,	0.1%
@410°F.,	41.0% over
I. B. P.	136°F
10%	212
20	262
30	328
40	400
50	500
60	592
70	690
80	800

This crude is charged to a heat exchanger bank in the first operation through which the hot bottoms flow from the last operation, furnishing heat which drives off a portion of the vapors originally in the crude, and preheats it at the same time to assist in the other operations through which it passes. All of the vapors released from the charge as well as the topped oil enters the bubble tower in combination with other vapors, while the bottoms are drawn away as a hot charge to the pipe still; the topped crude having the following characteristics;

Gravity,	22.4° A. P. I.
I. B. P.	410°F.
10%	478
20	515
30	542
40	571
50	608
60	655
70	700

This material, under a pressure of 25 pounds, gauge, is picked up by the hot oil pump and under a pressure of 184 pounds, gauge, and delivered to the first bank of a series of tubes in the Foster-Wheeler pipe still. This coil is termed the preheater bank, and the temperature applied to the stock in process is around 832°F., this reading taken at the heater outlet. The drop in pressure is such that only 125 pounds is effective on the outlet, which leads the oil to an expansion drum, or time-element chamber.

From this apparatus, in which the temperatures are 810°F. at the bottom and 800°F. at the top, the charge flows under a process pressure of 85 pounds to the vapor heater coils, placed in the same furnace with the other tubes, where a temperature of about 1000°F. exists at the outlet. It enters immediately a reaction chamber, a long vertical drum without baffles or bubble plates. Next in line is a scrubber, another unrestricted vessel, where the heavier portions of the charge drops out as fuel oil having the following characteristics;

Gravity	12.6° A. P. I.
Cold Test	55°F.
Viscosity	275
B. S.	1.6%

The vaporized product leaves the reaction chamber and scrubber to pass to the bubble tower under a pressure of 25 pounds gauge, where the vapors are fractionated, together with those coming from the crude in the skimming operation. The top of the bubble tower is controlled to a temperature of 344°F., and the distillate has the following characteristics;

Gravity	58.4° A. P. I.
I. B. P.	96°F.
10%	140
20	171
30	197
40	222
50	245
60	270
70	298
80	330
90	376
E. P.	436
Recovery	96.5%
Vapor Pressure	8.6 Lbs.

The fractionated vapors leaving the top of the bubble column are carried through a series of three shell and tube water controlled condensers and coolers, being finished at the receiving tank to a temperature of 100°F. This product considered a third structure motor fuel in the Salt Lake district has an octane number of 63/65.

The same material blended with benzol enters the market as a regular motor fuel, and has the following characteristics:

Gravity,	51.2° A. P. I.
I. B. P.	104°F.
10%	141
20	158
30	171
40	182
50	194
60	210
70	250
80	284
90	356
E. P.	425
Recovery	97%
Corrosion	OK
Vapor Pressure	7.7 Lbs.
Octane rating	72/74

From an initial charge, as of July 31, 1934, of 1193 barrels there were recovered 798 barrels of gasoline, 220 barrels of fuel oil, residuum taken from the scrubber. This indicated that there was a recovery of 67.7 per cent in overhead distillate and 18.4 per cent residuum. The balance, a volume representing 14.7 per cent was accounted for by gas and coke.

The vapors from the plant are recovered with a compression gasoline vapor recovery unit, operated with a column pressure of 191 pounds. Recovered gasoline is utilized in blending with the finished motor fuel, both of which are subsequently treated in a continuous doctor contacting unit.

The product from this plant is distributed locally and through the state of Idaho, and the plant itself is located a few miles from the city of Salt Lake, near the town of Woods Cross. C. B. Owen, formerly of El Dorado, Kans. is superintendent in charge of operations.

With the Southwestern Refiners

By Allen S. James
N. P. N. Staff Writer

COLOMBIAN crude oil will be processed at the Baytown, Tex. refinery of the Humble Oil & Refining Co., beginning sometime in September, according to press reports from Houston, quoting H. C. Wiess, executive vice-president.

The oil will be refined for export, it was said. Approximately 10,000 barrels daily will be processed.

"Our machinery and labor," Mr. Wiess was quoted as saying, "will be utilized in refining a product which otherwise would be refined by foreign machinery and labor, in a foreign country. By this plan the Humble company is enabled to employ 125 men, and the program will appreciably ameliorate the general overstaffed condition in which the company finds its refining department."

Processing of the crude was expected to begin as soon as necessary facilities are constructed.

—NPN—

Plans for the fourth Road Oil Congress in Tulsa are being drawn up by William B. Way, chairman of the executive committee. The Congress will be held sometime in November.

Mr. Way says the coming Congress will deal largely with costs, facts and values. The first and second Congress was confined to road oil specifications, with papers by refinery technologists as well as road engineers. The third Congress was aimed more at bringing home to county and township officials the ease and economy of road oil use. Mid-Continent refiners, as in former years, will assist Mr. Way in developing a well-rounded program.

McMurray Refining Co., operating at Arp, Tex., is reported to have bought the cracking units of the Kettle Creek Refining Co. at El Dorado, Ark. The units will be dismantled and moved to the East Texas plant's location. The Kettle Creek plant has been shut down for some time. It is listed as having a Dubbs unit of 1400 barrels capacity.

—NPN—

Roy Stewart, traffic manager for Barnsdall Oil Corp., and Jim Payne, traffic manager for the Frisco at Tulsa, are among Tulsans spending their vacation in Colorado. They are trout fishing.

—NPN—

M. A. Wilson is now general auditor of the Empire companies at Bartlesville, succeeding the late O. P. Warlick. Mr. Wilson has been with the Doherty interests for a number of years, starting at Amarillo as office boy. He was transferred to Bartlesville in 1916, and was made assistant general auditor in 1921.

—NPN—

The Duncan Oil Co., which is owned by the same stockholders as the Rock Island Refining Co., of Duncan, Okla., has purchased 200 clean tank cars from the Eason Oil Co. of Enid. Delivery already has been started. The seller is repainting the tank cars aluminum with black stenciling reading "Rock Island Refining Co., Duncan, Okla."

Composition, Properties and Uses Of Modern Lubricating Greases

by C. C. Wilch*

(Presented before Technical Section, La.-Ark. Refiners Association)

The accompanying article is a most complete condensed study of the requirements for lubricating greases, arranged according to the type of components employed in their manufacture. For the greasemaker, and the buyer and user of greases, the information given is an excellent resume of the present position of grease technology.

LUBRICATING greases are ordinarily thought of as petroleum products of unctuous, salve-like consistencies or of a hardness describeable as semi-solid. This non-fluid type, with but few exceptions, are soap thickened mineral oils. The different soaps employed as thickeners give a wide variety of textures. Where one soap may give a buttery, short shear texture, another, compounded with the same mineral oil will give a tough, sponge like, long shear texture.

This difference in outward or physical characteristics is in many instances an all important factor in determining the suitability of the lubricant for a particular lubrication requirement. For instance, the sponge texture which denotes a high degree of internal cohesion within the grease body, is more effective than the shorter shear, buttery texture in resisting centrifugal force and channeling. Therefore, it is more suitable for ordinary gear lubrication. On the other hand, the short shear, low cohesion property lubricant possesses a greater resistance to flow and, incidentally, is more serviceable for long periods of duty on open type bearings.

Recently, however, greases of fluid or oil-like consistencies have become of major importance. The viscous soap oil mixtures previously used have, in many instances, given way to lighter bodied lubricants of very superior lubricating film strengths. Changes in mechanical construction and increased speed of machine parts, have introduced a need for this type lubricant.

The need originated with the automotive industry. They, alone, have called upon the grease manufacturer to build a lubricant differing from all previous requirements. The introduction of such mechanical changes as free wheeling, automatic gear shifting devices, and higher gear speeds, has necessitated special lubricants.

The highly viscous sponge textured soap-oil mixtures formerly employed, did not function properly, due to numerous reasons. In high speed transmission the very viscous lubricant was found to be unable to resist centrifugal force, and consequently, failed to establish contact with the gear face at high speed. Straight mineral oils also failed to function satisfactorily under severe lead conditions, because of insufficient lubricating film strength. Thus, we have introduced as extreme pressure lubricants, comparatively low viscosity compounds of mineral oil with various lubricating film strength builders.

For free wheeling and automatic gear shift device, highly viscous lubricants were again found inadequate, because of the resistance offered to the sliding and throw out action of the machine parts. Straight mineral oils will suffice, but more satisfactory year round performance is obtained by adding compounds to improve their viscosity temperature relationship and to improve penetrating and spreading property of the oil on metal surfaces.

GREASES in general, regardless of body texture or lubricating functions, may be classified somewhat roughly into the following four major groups:

1. Admixtures of mineral oil and solid lubricants.
2. Mineral oil residua and blends of residua with other petroleum fractions.
3. Soap thickened mineral oils.
4. Compounds of mineral oils with various lubricating film strength builders.

Lubricants of Groups 1 and 2 are in every sense of the word, "specialty" products, since they have a very limited range in the lubrication field. They are not widely used and their sales possibilities are by no means fully developed. Few of them are known by trade names such as used to identify the many soap thickened lubricants. Tractor Roller Greases (used to lubricate the track bearing of traction type tractors) Wire Rope Compound, and Rock Bit Lubricant (used in connection with oil well drilling) are some of the few familiar trade names.

The first group (admixtures of mineral oils with commonly termed solid lubricants such as graphite, mica, talc, asbestos fibers, etc.) in some instances are invaluable. For the lubrication of an ill-fitting machine part, functioning under a heavy, intermittent load and at slow speed, the filler or solid lubricant, absorbs the force of impact, preventing severe metal to metal contact. Furthermore, in functioning as a filler,

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the solid lubricant tends to smooth away any roughness of contact surfaces which may be encountered.

Examples of the type are: Tractor Roller Lubricants and lubricants for railway car unloading devices, concrete mixers, mechanical digging equipment and the like. They usually consist of viscous mineral oils mixed to the desired consistency with asbestos fibers or other fillers possessing a lesser degree of hardness than steel.

They are used for lubricating both bearing and gears. They are not adaptable for close fitting machine parts since the filler is apt to accumulate and clog the feed to a bearing or build up between the teeth of a gear and cause undue strain. However, this statement does not apply absolutely, since graphite, when used in this capacity, is of such a finely divided state or is used in conjunction with a soap thickener in such a manner that these disadvantages are overcome.

THE second group consisting of mineral oil residua and blends of residua with other petroleum fractions, possess characteristics peculiarly valuable to certain lubricating problems. Greases of this type are especially suitable for rock bit lubrication, dredges, cranes and for wire rope and gears operating under water or exposed to severe weather conditions. Asphaltic residue, as a base, is highest in favor. Its high specific gravity and high degree of metallic adhesion, affords greater protection against under water or severe weather conditions.

The lubricant is made either by reducing the crude to the desired consistency or by blending a heavy residuum with a lighter petroleum fraction. In some instances such as, with wire rope compound and lubricants for open type gears, it is common practice to blend the heavier fraction with a light volatile naphtha. The volatile portion subsequently evaporates, leaving a tenacious lubricant practically impervious to water action.

Obviously, lubricants of this type are not suitable for machines operating under conditions of high speed or light load, since power efficiency would be greatly effected in overcoming lubricant coefficient of friction.

In discussing the third group, or soap thickened mineral oil type of greases, it is the intention to cover generally, the manufacturing procedure, physical properties and the relation of physical properties to lubricating service. Soap-oil mixtures are the most commonly known greases. They are used in place of mineral oils, chiefly, because they are more economical lubricants. By reason of heavier body and greater resistance to flow, less waste is encountered and the same lubricating results are obtained at a lower cost. Also a soap-oil product will lubricate for a comparatively long period of time without attention or replenishment.

The soaps employed as thickeners include sodium, calcium, aluminum and lead. They are the products of chemical reaction of a fat (either animal or vegetable origin) with the metal bases. The metallic base, obviously, determines the type of soap, plays the major part in forming the principal characteristics and general physical properties of the grease product.

Sodium or caustic soda greases are characterized by their solubility in water, and high liquefaction temperature or melting point; calcium or lime greases by insolubility in water and instability at moderately high temperature; aluminum soap products by stability at high temperatures, water insolubility and brilliant transparent appearance; and lead soap products by high specific gravity, comparatively low melting point and much less viscous body.

The saponifiable oil or fat, in most cases, is of but slight importance to the construction of a grease product. However, the more specific properties, such as texture, metallic adhesion and the cohesive character of the grease body are controlled to some extent by selection of the fatty ingredient. But as a rule, cost and appearance of the resulting grease product, are the determining factors in the selection of the fatty oil.

The grade and body of the mineral oil incorporated, is largely responsible for the lubricating value of a soap-oil mixture. Although viscosity is by no means a true index of lubricating value, it stands unquestioned that an extremely heavy bodied oil possesses a stronger lubricating film than an extremely light bodied oil. Interesting to manufacturers of naphthenic base oils, is the claims of numerous investigators that oils of high natural sulphur content possess greater lubricating film strength than oils of either low natural sulphur content or oils to which free sulphur has been added.

Calcium Soap Greases

Calcium or lime soap greases are in demand probably more than any other soap thickened lubricant. The commonly known varieties include the several grades of cup grease, pressure gun grease, ball and roller bearing grease, axle grease and water pump grease. The greases, ranging from semi-fluid to semi-solid consistency contain from four to twenty-five per cent soap. The mineral oil ingredient is usually a highly refined light or medium bodied grade.

Lime base products may be made in two ways and are classified, according to the method used as cold set greases and hot mixed greases.

The cold set greases are made by simple mixing of rosin oil, lime and mineral oil. Saponification takes place and the mixture hardens without application of heat from an outside source. Rapid saponification, cold, is peculiar to the fatty members predominating in rosin oils.

Cold set greases are comparatively inexpensive and are designed for rugged duty, where the cost of higher quality lubricants is prohibitive. Set greases are extensively used on agricultural machinery, where they are known as axle greases, and an oil field pumping equipment where they are known as Jack Post greases.

Hot mixed lime soap greases are made by saponifying the fatty ingredient with an accurately measured amount of hydrated lime. The chemical reaction is carried to completion in either open type steam jacketed kettles or closed type pressure cookers. The extended period of contact at elevated temperature enables the reaction to be carried nearly to completion and

consequently the cooked grease has a more finished and lustrous appearance than the cold set variety.

The ordinary run of cup, pressure gun, roller bearing and water pump greases found on the market are examples of the type.

Lime soap greases are not applicable as lubricants where the temperature is apt to rise above 212°F. The grease is not a true solution of soap and oil but is a suspension of soap and water in oil and is dependent upon the water content to maintain the grease body. Consequently, at a temperature in excess of 212°F., the grease loses its moisture and a separation of soap and oil results.

The advantageous characteristics of lime soap grease are: insolubility in water, and short shear or buttery texture. The texture indicates a low degree of cohesion within the grease body, and incidentally, high resistance to flow. Flow resistance is of great advantage on bearings required to operate without attention for comparatively long periods of time.

The grease is easily displaced by centrifugal action, meaning that it channels readily, and therefore, it is unsuitable for gear lubrication.

Sodium Soap Greases

The equipment and manufacturing procedure for sodium soap or caustic soda base greases are essentially the same as that used for lime bases greases.

The grease has a characteristic sponge or fibre like texture, and, differing from calcium soap greases, shows a high degree of cohesion within the grease body. This cohesive property causes the grease to flow in a stream with the moving part. Obviously, the grease does not channel under normal conditions and is not easily displaced by centrifugal action, except at extremely high speed. The light bodied grades containing from approximately one half to six per cent soap are used for ordinary gear greases (not extreme pressure). Caustic soda greases have higher liquefaction temperatures than any other type of soap-oil mixture, and consequently, the products of heavy consistency ranging from approximately eight to 50 per cent soap, are used for high temperature bearing lubrication. It is this type of grease which is used in steel mills on machine parts which operate in proximity to molten metal. Various railroad locomotive greases are also examples of the type. The more commonly known products, in addition to the various grades of gear greases, are automotive wheel bearing, universal joint and steering sector lubricants.

The reason they are not more extensively used is due to the fact that sodium soap is water soluble, and consequently, its grease products do not give a long period of service where they are apt to come in contact with any considerable amount of water. Were it not for wet weather conditions, sodium soap greases could probably be used in place of lime and aluminum greases for automotive chassis lubrication.

Aluminum Soap Greases

Aluminum soap greases, compare closely in texture and lubrication adaptability to calcium soap greases. However, they have a more brilliant transparent appearance, and far better stability at high temperatures. They offer, by far, the most perplexing problems in grease manufacture. Every ingredient plays a major part in shaping the physical properties of the resultant product. The aluminum soap of stearic acid, incorporated with a low viscosity mineral oil, yields a grease product of low cohesive character as evidenced by its short shear, buttery texture. The aluminum soap of oleic acid, incorporated with the same mineral oil, yields a product of extremely high cohesive character, and pronounced rubbery texture.

Contrasted with other soaps herein discussed, aluminum stearate, when incorporated with an extremely high viscosity oil, yields a grease of softer consistency than when incorporated with a low viscosity mineral oil. The rate of cooling also has an important bearing on the grease texture and consistency.

It is necessary for the grease manufacturer to make an extensive study of the mineral oil, the fatty ingredient and also the cooling rate best suited for the grade he wishes to market.

The manufacturing procedure for aluminum soap, is different than that of other soaps, in that it is a product of a substitution reaction. The fat is first saponified with caustic soda. Then by addition of an aqueous solution of an aluminum salt, the sodium radical of the soap is replaced by aluminum. The water insoluble aluminum soap separates, thus permitting the solution containing the sodium salts to be drawn off. By repeating washings, the aluminum soap is freed entirely of excess saponifying agents.

Since aluminum soap can be purchased already prepared for simply mixing with mineral oil, many grease manufacturers do not go to the trouble of making the soap.

The aluminum greases are commonly referred to as solidified oils, transparent cup and pressure gun greases and as an all purpose lubricant. The cost of the type is high compared with other soap-oil products and apparently its advantages as a lubricant are not sufficient to offset its higher cost since it has not made any great headway since first introduced. However, it has become quite extensively used on automotive vehicles as the Tryon shackle assembly lubricant. It is stable for long periods of time, does not oxidize or crust and has a slow flow property especially adaptable for this requirement.

Lead Soap Greases

Lead soap greases are employed largely as extreme pressure gear lubricants. The soap is very deficient as a mineral oil thickener, and in fact, when blended with a heavy body mineral oil, the viscosity (measured at 210°F.) may be decreased. One of the numerous early uses of the soap was for compounding into railroad car journal oil.

Lead soap has an exceptionally high specific gravity as compared with other soaps. It is apparent from observations that lead base lubricants possess a high degree of metallic adhesion, which may be the responsible factor of its ex-

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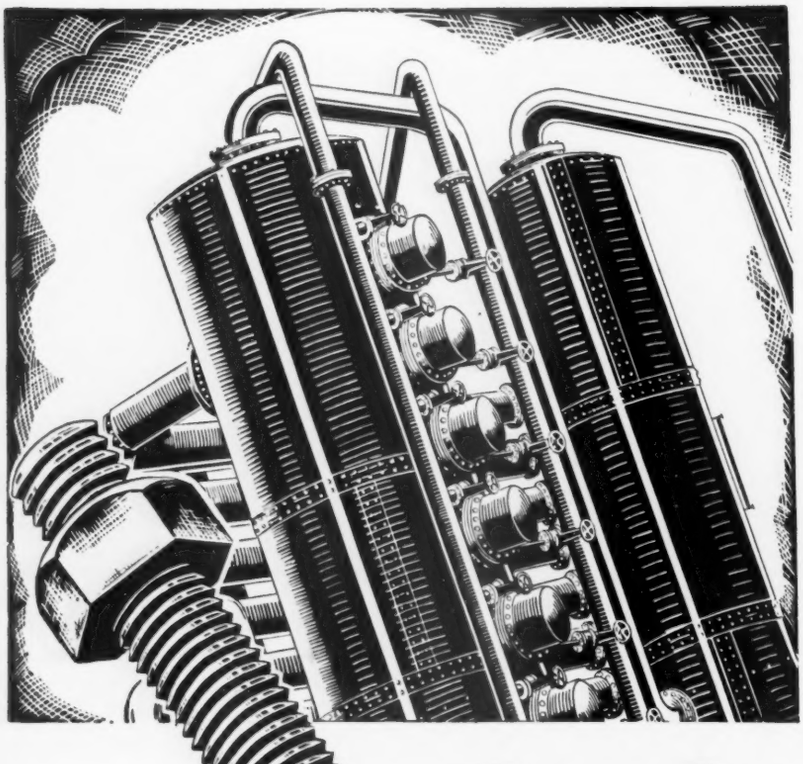

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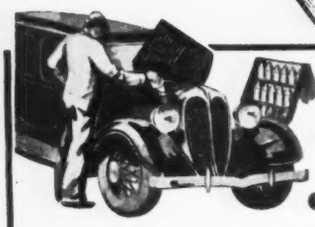
These steels cover practically every condition met with in high-temperature fastenings in refinery work. The particular steel to be used in a specific application depends, of course, on the temperatures involved, and other factors. If you will state your problem, Bethlehem metallurgists will gladly make recommendations.

OIL-QUENCHED NUTS. Don't expect to derive the full benefit of studs and bolts made from Bethlehem High-Temperature Steels when you use ordinary nuts with them. Use Bethlehem Oil-Quenched Nuts. These nuts are hot-forged from high-carbon steel, then heat-treated. They are strong and tough. Combined with studs or bolts of the proper Bethlehem steel, they assure efficient high-temperature fastenings.



Refinery to Crank Case

Large quantities of oil are now being marketed in quart containers that are sealed at the refinery and remain sealed until the oil is poured into the customer's crank case at the service station.

Bethlehem Open-Hearth Coke Tin Plate is ideal for making these containers and is, in fact, being widely used for this purpose.

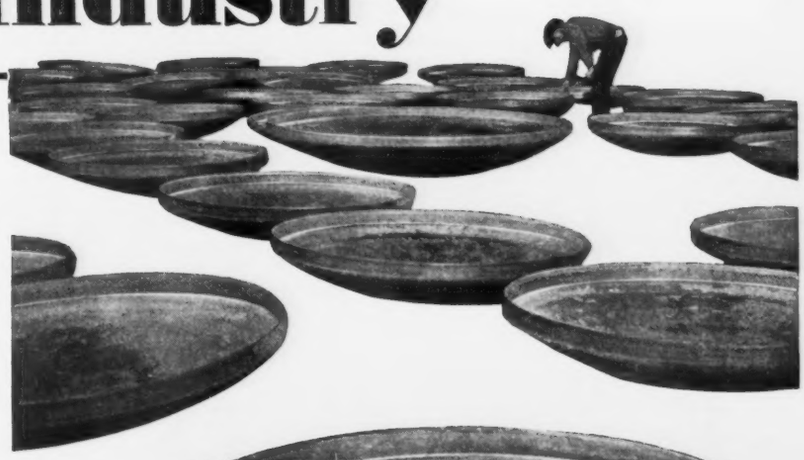
Bethlehem Tin Plate is a quality product. It has superior stamping qualities and clean surface. It is uniform to gauge and well coated with bright new tin.

BETHLEHEM
***open-hearth coke* TIN PLATE**

District Offices: Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Houston, Indianapolis, Milwaukee, New York, Philadelphia, Pittsburgh, St. Louis, St. Paul, Washington, Wilkes-Barre, York. *Pacific Coast Distributor:* Pacific Coast Steel Corporation, San Francisco, Seattle, Los Angeles, Portland, Honolulu. *Export Distributor:* Bethlehem Steel Export Corp., New York.

of the Oil Industry

How's this for Service on Steel Plates and Heads?



Order for plates and heads for forty 64-in. dia. tanks received 1:00 P.M. Friday

Complete order shipped 6:00 Saturday

WHEN the order was received, slabs of the desired analysis were available. But the plates had to be rolled, discs cut out, the heads flanged and dished, and the entire shipment loaded on cars in little more than a day.

No special procedure in the usual Bethlehem service was necessary to accomplish this. The order was handled in the regular way. Our flanging shop and plate mills and steel-making units that feed them are geared for speed in handling orders. Not only plate mills, but open-hearth furnaces, even blast furnaces, are located almost within a stone's throw of the flanging shop, and are under the same management.

That's why so many buyers of Steel Plates and Heads for applications in the oil industry turn to Bethlehem when they want quick service. And get it.

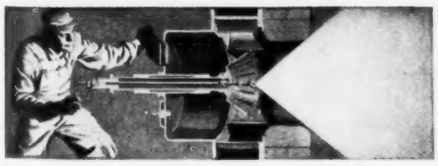
This cracking still was forged from a single steel ingot

IN making forged cracking stills Bethlehem starts with an ingot. First the ends are discarded, then the center is pierced, leaving only the best, soundest, strongest metal. The forging is worked out to approximately the final size on a giant hydraulic forging press, inside machined, and the ends "necked down."

Cracking stills made in this way are safe, and incomparably strong. The thorough working of the metal, over and over, makes it homogeneous and gives it a dense grain structure. And there's not a seam or a joint in the entire vessel.

Bethlehem facilities permit making these one-piece forged cracking stills in any length, diameter, and wall thickness.

Bethlehem-Dahl *Mechanical Atomizing* Oil-Burning System



THIS oil-burning system atomizes oil mechanically, without using any steam for atomizing purposes. It is extremely flexible in its operation, maintaining virtually uniform pressure over a wide range of loads. It can be applied to any type of boiler and handles any grade of fuel oil.

Catalog describing the Bethlehem-Dahl Oil-Burning System in detail and showing typical installations will gladly be mailed on request.

Other Bethlehem Products used *in the* Oil Industry

CORROSION-RESISTING STEELS — A grade for every purpose.

FORGINGS — Carbon and alloy steel; hammered and hydraulically-pressed; drop and upsetter.

SHEETS — All kinds of sheets: Black and galvanized, flat and corrugated. Sheets of Beth-Cu-Loy (copper-bearing steel) for resistance to atmospheric corrosion.

WIRE — Plain and galvanized; Bethanized wire (special zinc-coated).

CARBON STEEL BARS
SPECIAL ROLLED SECTIONS
STRUCTURAL SHAPES
PIG IRON
BOILER TUBES

BETHLEHEM LINE PIPE

BETHLEHEM PIPE has the strong, uniform sections, with smoothly finished ends, and the flexibility and easy-welding qualities that are essential in pipe for line service.

In pipe-line work, in any other application, you can depend on Bethlehem Pipe for long, trouble-free service.

cellent lubricating performance under heavy load at high speeds.

Proper selection of saponifiable oil is very important in the manufacture of lead soap. The fatty oils of the Acetic or saturated series, yield lead soaps which are but slightly soluble in petroleum fractions, whereas, the lead soaps of the oleic or unsaturated series are quite soluble. Consequently, fats of high iodine absorption value yield the more oil soluble lead soaps. Fish oils and oleic acid are commonly used.

Sulfur is commonly used in conjunction with the lead soap in manufacturing extreme pressure gear lubricants. The sulfur in some lubricants is chemically combined with the soap, and in others it apparently is physically absorbed in the grease body.

Extreme Pressure Lubricants

The third group, consisting of compounds of mineral oils with various lubricating film strength builders, is that classification of lubricants which originated to meet the requirements of the automotive industry.

The first in line was an extreme pressure lubricant. Higher powered motors for greater speed and changes in gear design to give more efficient transmission of power, resulted in increased gear tooth pressures. In addition to increased pressure, the introduction of hypoid and worm drive gear assemblies presented a more severe condition of gear face contact. These improved designs are such that the rubbing action is extended over a greater distance and the time element increased, since some part of the gear face is in contact with the drive over the entire length of the worm. Obviously, while this rubbing action is in progress, a considerable amount of frictional heat is generated. Under these conditions, ordinary mineral oils and greases cannot maintain a protective lubricating film.

The course of investigation and development work has not been entirely one of trial and error. It had long been known that sulfur in oil was an effective cooling agent for hot bearings, also that lead soap compounds were exceptionally good lubricants for railroad car journals where hot boxes were frequently encountered. The addition of fatty oils of any description to a mineral oil was also known to improve penetrating and spreading property of the oil on metal surfaces. Incidentally, the principle of this action is, lowering of surface tension.

With the development of adequate testing methods and equipment, it was found that lubricants of high sulfur content caused a film of iron sulfide to be deposited on the contact faces, and that this film, in cases of lubricant failure, served as a protection against serious gear scoring. This principle has been termed "border lubrication" and it is this principle upon which all extreme pressure lubricants are now built.

Chlorine compounds were later found to function in much the same manner as sulfur compounds, the formation on the contact face being Iron Chloride. Consequently, a combination of the two elements, "sulfur chloride" was tried with satisfactory results.

Extreme pressure lubricants now marketed by competent lubricant builders contain one or more of the above mentioned ingredients. Fat is used unsparingly, the lubricants rarely containing less than ten per cent, except in the case where lead soap is used. In fact, fat is a convenient and valuable medium for introducing either sulfur, chlorine or sulfur chloride. The mineral oil ingredient varies greatly. Some manufacturers use a crude residuum, while others are content to use only the highest refined oils. Low pour point oils of less than 140 seconds Saybolt Universal viscosity at 210°F. are generally employed. Free wheeling lubricants are as a rule low pour point well refined mineral oils containing an amount of free fat and in many instances a compound to improve viscosity temperature relationship.

To predict as to what the future trend in grease manufacture may be, let us review the trend of the past. Competition has demanded constant improving of appearance. Incidentally, ingredients have become more accurately proportioned, and cooking has developed to more and more of an art. Improved equipment, such as the autoclave or pressure type cookers, with jackets so constructed that the grease batch can be alternately heated or cooled, has been a big factor in obtaining uniformity of appearance. Recently substances formerly considered foreign to grease has been introduced to give them certain appealing characteristics. Latex solution is the chief culprit or benefactor as the case may be. The compound gives the lubricant a decidedly stringy, unnatural texture.

AS FOR the lubricating quality, the present assortment of greases has served remarkably well. For instance, we have stationary gasoline engines with main and connecting rod bearings lubricated with ordinary cup or pressure gun grease. The engine will operate at a high speed for a day at a time without replenishment of lubricant. A shot of pressure gun grease in the shackle and king pin bearings of our motor cars and trucks will serve for a thousand miles or more. And a pack of fibrous sodium soap grease on the front wheel bearing will last for the life of the car. We have greases which will withstand temperature in excess of the flash point of the incorporated mineral oil. And on the other hand, we have greases which, at extremely low temperatures, offer only slightly more resistance to movement of a machine part than at normal temperatures.

Extreme pressure lubricants are not so well developed and cause us considerable worry. We are seldom sure that we are getting a properly compounded lubricant that under cold weather or heavy load conditions will safeguard against costly repairs.

It is in this field that we may expect a higher degree of perfection and a more widespread and definite knowledge of what the lubricant should be, but this knowledge must necessarily be preceded by more accurate and reliable testing methods and testing equipment. We need to know in definite and comparable units, the lubricating film strength of lubricants and their individual ingredients.

Large Merchandise Stock,
Indoor Service Facilities,
Better One-Stop Departments,

Guides To Jobber In Modernizing Stations

By E. L. Barringer
N. P. N. Staff Writer

AT meetings of Wisconsin jobbers a small, outspoken, fiery man frequently will rise to his feet and offer sound opinion on the subject under discussion. That man, Tony Fiore, jobber at Madison, has applied the same energy to modernizing some of his service stations this summer, in keeping with modern merchandising trends. The following article relates the merchandising principles of his modernization program.

ELEVEN years ago Tony Fiore started in the oil marketing business in Madison, Wis. building stations in keeping with the trend of the times, small buildings with the traditional canopy over the pumps.

Today his company, the Fiore Coal & Oil Co., has climbed to the top of the heap in size and, in starting a service station remodeling program this summer, Mr. Fiore has capitalized on the merchandising experience gained over these 11 years as applied to station layout and design.

In putting this experience to practical use in the remodeling program Mr. Fiore decided that:

1. The original cost of a station with enclosed facilities for lubrication, oil draining, tire and battery departments is only slightly more than for a conventional type small building.
2. The station with outdoor facilities for lubrication and oil draining is definitely handicapped during inclement weather.
3. The station without indoor service facilities today is hard pressed to retain its customers.
4. The station handling tires and batteries should have a large stock, sufficient to meet the demands of any customer.
5. The cost of warehousing tires and batteries in the service station is no more than similar costs at the bulk plant, in fact less, and the station has the appearance of being successful in these departments.

In estimating building costs Mr. Fiore considers the concrete drive as standard equipment, whether the station has an enclosed service bay or not, and that the station requires space for rest rooms, and an office for the salesmen. From the cost of a small, old type building he subtracts the outlay for a canopy, now obsolete, adds the costs of additional walls, floors and roof for the service bay, and arrives at the final figure of around $1000 additional for a more modern, better equipped station.

For this additional $1000 outlay Mr. Fiore believes his stations gain a much greater amount in merchandising value, and are in a better position to compete with other service stations in the community.

A location with only a small station building, and outdoor service facilities, was sufficient years ago to hold business, he has found, but he believes today such a station cannot compete on rainy days and during the winter months with outlets having enclosed facilities. As long as the sun shines, lubrication service, oil draining, tires and batteries can be sold outdoors. When rain or snow is falling, or the temperature is low, the customer hesitates to keep his car outdoors any more than necessary, and dislikes getting wet himself or asking salesmen to work in such weather, in his experience. The station with enclosed facilities is in a better position to solicit new business and to retain old customers.

SALES of all merchandise will be increased in the modernized stations, Mr. Fiore predicts, and tire and battery sales probably will be doubled. The real test is anticipated during the coming winter, but the current record of one station forecasts that the prediction of increased sales will be realized. This modernized station, on University Avenue on the main highway northwest from Madison, already has doubled tire and battery sales in spite of the street being closed all summer to through traffic.

Modernizing the stations provides ample space for a stock of motor oil in cans, tires, and batteries, and through this larger retail stock delivery and warehouse costs are lower, and the merchandising facilities of the stations increased.

Storage space is now available on shelves lining the walls of the enclosed service bays for oils and batteries. Racks made from two by four timbers have been constructed against the rear walls, under the roof, so that about half

a car load of tires can be stored in the station in what otherwise would be waste space.

The company formerly maintained a central storage for tires and batteries, kept only a small inventory at the stations, and supplemented these stocks with quick delivery service as the merchandise was needed. Under the new arrangement small shipments, such as tires received from Chicago by truck, are delivered direct to the stations. Larger shipments are parceled out on arrival. Space is saved by having merchandise warehoused at the retail outlet instead of in a central storage. Bulk deliveries take the place of practically all smaller, quick movements of merchandise and at a considerably lower cost.

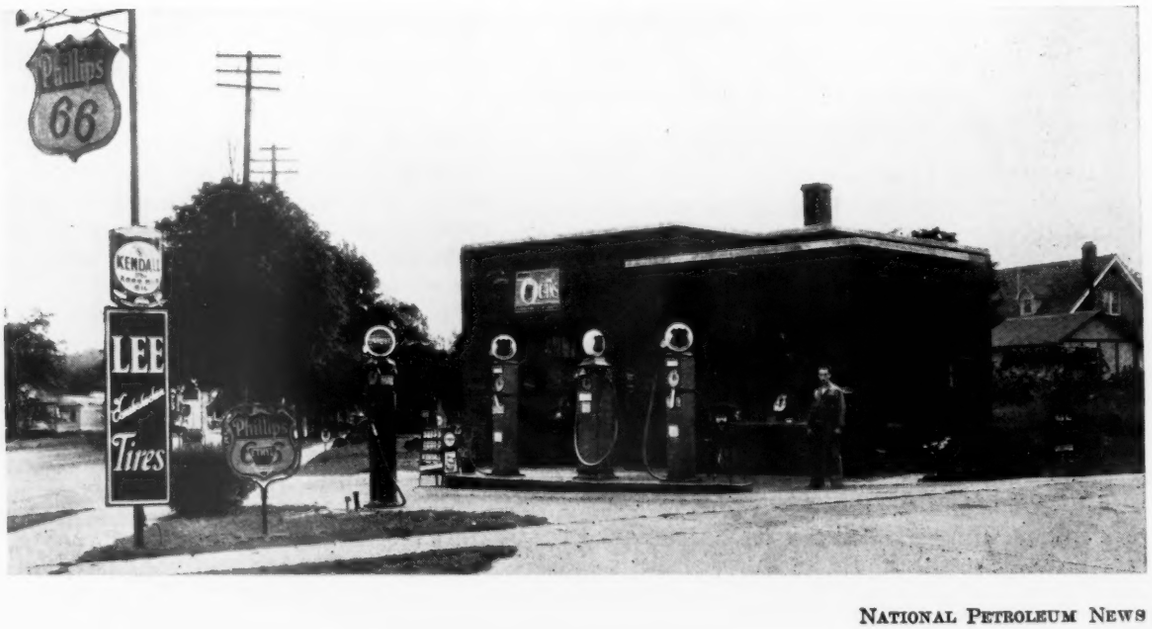
The stations now have an adequate stock to transact business. When the station carried only a few tires and batteries, mainly for display purposes, a customer would be worked up to the point of buying, then there would be the delay while the merchandise was being rushed from the warehouse, meanwhile the sale perhaps cooling off. The stations now have a sufficient stock to show the customer. When the customer buys, the merchandise is taken off the shelf or rack and the goods placed on the automobile without delay.

Mr. Fiore believes that an adequate stock at the service station is highly important in modern merchandising. He thinks many sales are lost through failure of the merchandise to be at the right place at the right time. There is much hard work connected with getting a customer in the mood to buy, and when the customer says "yes" the station should be ready to produce the goods and complete the sales transaction immediately.

Also, he believes a large stock gives a visible impression that the station is doing considerable business in selling tires and batteries. An adequate stock must be maintained some place on

BEFORE

AFTER



A Fiore outlet, at Madison, Wis., showing how the station was modernized, by eliminating the canopies, supplying an enclosed servicing department and providing a display window at an advantageous point in relation to the pump island

BEFORE

With an enclosed lift, new computer type gasoline pumps, and a new exterior this Fiore station is in a better position to compete for business. The old station, and the new one, at the completion of the company's current modernization program. Exterior walls are of imitation stone

AFTER

the jobber's property. Instead of keeping merchandise in a warehouse, gathering dust and dirt, he believes the goods should be at the point of sale where the customer can see them.

Modernization of the Fiore stations, in keeping with the 11 years of marketing experience, indicates a new period in the company's history. Back in 1922 Mr. Fiore ventured into the coal business in Madison, with a few thousand dollars as capital. A year later he branched out into the oil business.

The company is still in the retail coal business, and in the oil business gasoline sales for the greater Madison area are figured in terms of millions of gallons a year and fuel oil sales are over 100 tank cars a season.

In previous years the company was building its retail oil operations through erecting service stations, primarily for gasoline sales. The company's policy now is to modernize these outlets, in merchandising ability as well as appearance. Mr. Fiore has been watching the one-stop station trend, and, by holding off in modernizing until this summer, he believes that he now has invested his capital wisely in numerous one-stop stations, each with a comparatively small investment, instead of concentrating on a few expensive outlets.

Prior to the modernization program there were seven small Fiore stations in Madison. Three were modernized this summer, and will enter the winter season with indoor lifts, new heating plants, modern driveways, and extensive stocks of tires, batteries, and oil.

The modernization plans resulted in the removal of pump island canopies, installation of computer type gasoline pumps at two stations, and the extension of the original station build-

Construction work at this Fiore station was not completed, but the shelves already erected indicate the extensive use of wall space for a large merchandise inventory to eliminate expensive "quick" deliveries, to show the customer that the station has an adequate stock

ing to provide indoor service facilities with doors cut through from the old part. The original station provides space for rest rooms, salesmen's office, and storage of small merchandise. All stations have new steam heating plants, with blowers to circulate air over the pipes.

Remodeling of each station was individualized to conform to requirements of the ground space. One of the stations was a stucco building, with an outdoor lift at one side, and the air standard at the street curb. The canopy was removed, three computer type pumps were installed, one with a display cabinet, and the air standard moved to the side of the building, along the drive. A window, directly back of the pump island, was made lower and wider for better display value. The new section makes the finished station rectangular, with the longer side toward the drive. Then the entire building was covered with an imitation stone.

The second station was at an angle to the intersecting streets, so the canopy was removed, and the service bay added to one side of the original building in an L shape, with part of it extending around at the rear. A flat roof was placed on the old and the new parts, with the new addition several feet higher than the original building.

The third station remodeled was also on a triangular lot, in a neighborhood business district, so the new section was built to give additional space. This station has an indoor lift, and also a bay for car washing.

In addition to remodeling the three stations this summer Mr. Fiore also has been improving two parcels of real estate with service stations, following the merchandising policies applied to the modernized outlets. One of the new stations is in the eastern end of the city, on a through street that has only one other station. The other station will be near Capitol Square, on a lot now used for parking. Parking service will be continued, but the small shelter house and gasoline pump will be replaced by a modern station.

Plan Co-operative Program To Boost Oil Heating Business

CHICAGO, Aug. 25.—A co-operative effort to further the use of oil heating in Chicago is being made by the oil burner and oil companies interested in this business.

At present a definite minimum sum has been pledged for the campaign by the Burning Oil Distributors Association and by the Chicago Oil Burner Association and an effort is being made to obtain the interest and support of those companies not members of either of the two associations.

The initial step in that regard was taken Aug. 22 at a dinner and business meeting sponsored by the two associations. Those represented included oil burner manufacturers, fuel oil distributing companies and refiners and wholesale distributors of burning oil, including both independents and major companies.

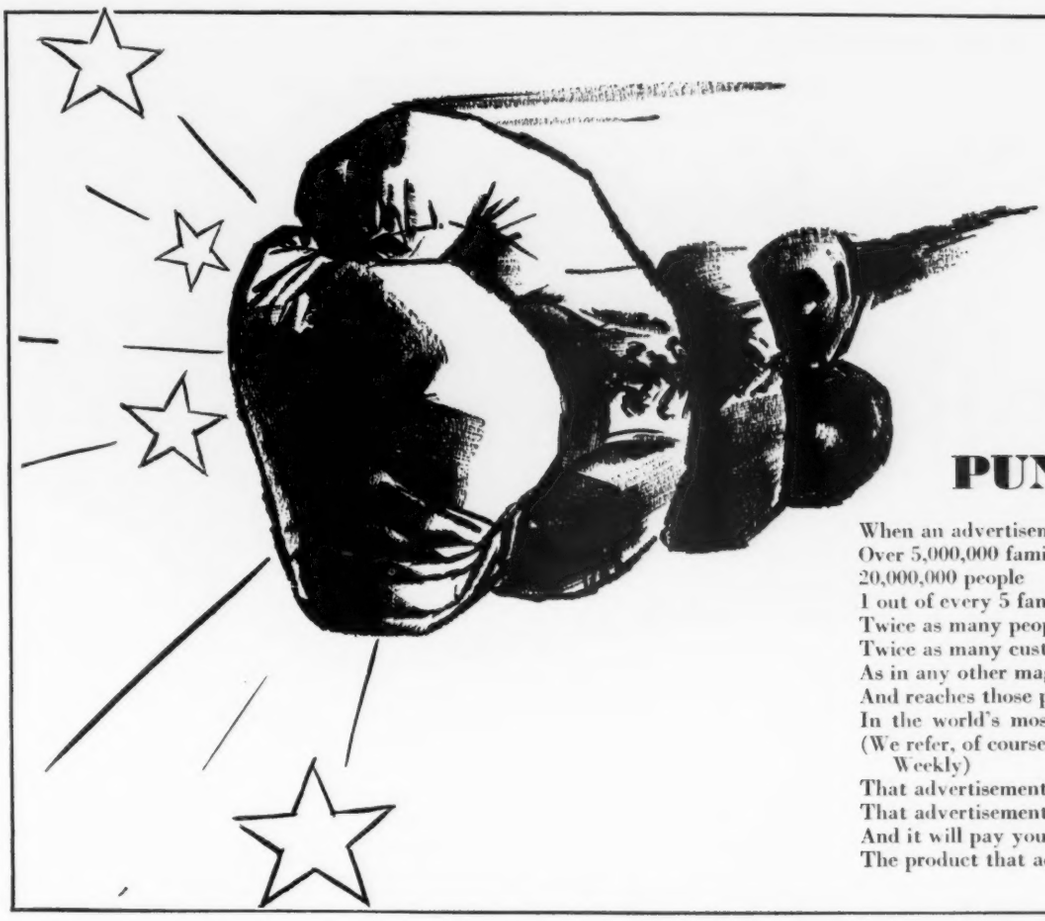
It is planned to run a series of newspaper advertisements which will play up the advantages of "automatic heat" as well as showing the advantages of oil heating over all other kinds. A joint advertising campaign will be carried on through the months of September and October and November.

Other advertising will be done through folders, which will be distributed through the oil and oil burner companies and through banners which have been prepared to carry on tank trucks and to be posted at service stations and bulk plants.

A lack of co-ordinated effort between the oil burner companies and the oil companies, and even between the oil companies themselves has hampered the sale and use of oil burners and heating oil, it was brought out at this meeting.

It also is planned to hold joint monthly meetings for salesmen, service men and other members of the oil and oil burner groups for the purpose of better acquainting these men with the problems and ideas of both branches of the heating oil industry.

What every oil man should know



PUNCH

When an advertisement reaches
Over 5,000,000 families
20,000,000 people
1 out of every 5 families in the nation
Twice as many people
Twice as many customers
As in any other magazine in the world
And reaches those people
In the world's most *interesting* magazine
(We refer, of course, to The American Weekly)
That advertisement has *punch*
That advertisement sells *goods*
And it will pay you to *feature*
The product that advertisement *sells.*

The American Weekly—*what it is*

● **The American Weekly is the largest magazine in the world. It is distributed through 17 great Hearst Sunday Newspapers. In 597 of America's 995 towns and cities of 10,000 population and over, The American Weekly concentrates 67% of its circulation.**

In each of 134 cities, it reaches one out of every two families
In 125 more cities, 40 to 50% of the families
In an additional 165 cities, 30 to 40%
In another 173 cities, 20 to 30%

. . . and, in addition, more than 1,885,000 families in thousands of other communities, large and small, regularly buy and read The American Weekly.

Greatest Circulation in the World

THE AMERICAN WEEKLY

"The National Magazine with Local Influence"

Main Office: 959 Eighth Avenue, New York City

Seen by N.P.N.

MERCHANDISING AT SERVICE STATIONS

From the Road

NATIONAL PETROLEUM NEWS Editorial men who write its marketing news travel by automobile. They are customers at oil company stations all over the country. Here are some of their observations, with photographs, of merchandising and advertising ideas they have recently encountered

Regular Pumps Dispense Naphtha, Kerosine

Cleaners naphtha and kerosine are sold at many service stations, especially in smaller cities and in the country, but the Valley View Oil Co., Waukesha, Wis., features these products on the drives instead of keeping them stored in the back of the station building.

Dispensing is through a regular pump, on the pump island or side of the drive, and the naphtha and kerosine are stored in underground tanks. The equipment formerly was in gasoline sales service.

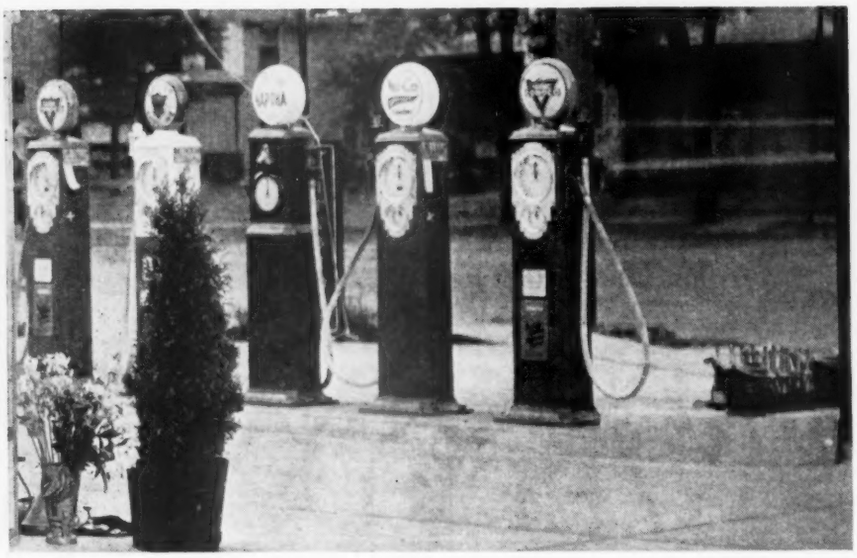
This dispensing method really started as a time-saver for the salesman, but the company found that a prominent display keeps reminding customers that naphtha and kerosine are available at the station, thereby increasing sales.

As in most cities there is a limit to the amount of light petroleum products that can be stored above ground, and Waukesha's maximum is 5-gallons.

The company figured that keeping naphtha and kerosine in a 5-gallon can in the station building took a lot of time, and also kept the salesman off the station drives while filling the customer's can.

With products dispensed through regular pumps the salesman does not have to leave the front of the station on naphtha or kerosine sales, delivery is quicker, and the merchandise is better advertised.

When the company recently opened a new porcelain-enamel station, with computer gasoline pumps, the naphtha pump was placed in the center of the pump island, the kerosine pump near the head of the outdoor lift.



Household naphtha and kerosine sales are handled direct from the pump island by the Valley View Oil Co., Waukesha, Wis. Of this battery of five pumps, the naphtha pump is in the middle and the kerosine pump at the extreme right

Consults Data on Air Pressure for Tires

A salesman at a Mobilgas station near Poplar Bluff, Mo., builds customer goodwill through clever showmanship at the air standard.

In his pocket he carries a data book which gives the tire pressure recommendations for many makes of cars, information which is available from the instruction book of the car manufacturer, from service agencies and other sources.

Before checking a customer's tires, he refers to his book and, with much consulting and flipping of pages, arrives at the exact pressure which should be carried. Whereupon he proceeds to inflate the tires, meanwhile informing the customer of the extra miles he may anticipate if his tires are scientifically cared for. Followed up, this service should lead to tire sales.

—NPN—

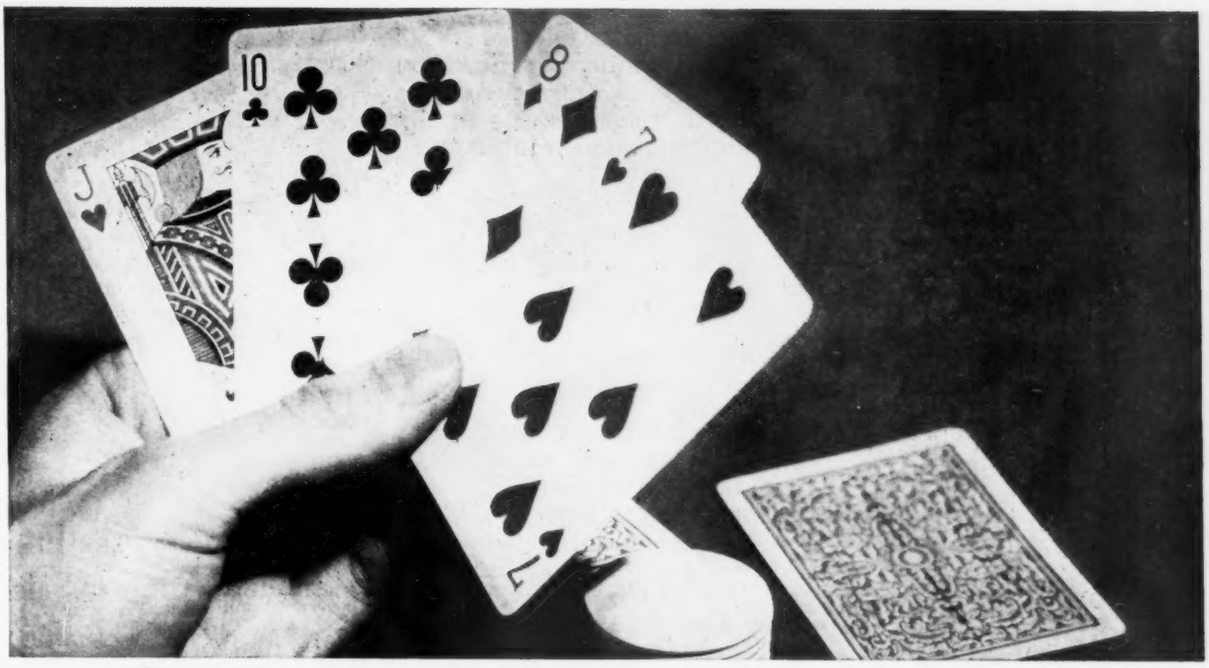
Selling Wiper Blades

Some station men sell a number of wiper blades by simply giving the customer a new blade to handle while they are filling the tank. They have discovered that many cars are standard equipped with cheap blades which soon become warped and deformed.

The procedure, after receiving the order for gasoline, is to hand the driver a blade with the statement, "It looks as though your windshield wiper had seen better days," or something to that effect, and to proceed immediately to the rear of the car to fill the gasoline tank.

Surprisingly often, by the time the servicing is completed, the customer has sold himself on replacing his worn wiper blade.

Don't Gamble



with your lubrication service

Efficiency

Convertibility

Minimum Investment

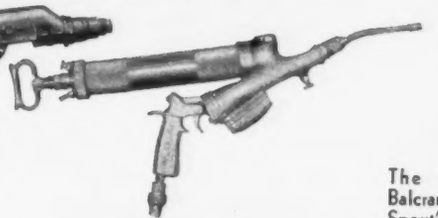
BALCRANK Lubricating Equipment is the best that money can buy—every piece of equipment is designed, tested, proved to be the most efficient lubricator in its field. Gives fast, thorough, constant service and long usage.

BALCRANK Equipment is designed and manufactured to care for the changes occuring in lubrication requirements. The Balcrank Exclusive Lever Push guns have interchangeable pistons and can be converted to high, medium, or low pressure. The Balcrank Specialized Lubrication Board has exclusive Convertible features not found in any other board. Name plates and gun hangers are interchangeable—the board is never obsolete.

BALCRANK Lubricating Equipment enables the service station to offer Specialized Lubricating Service at a low initial cost, units may be added as needed—Your board is never obsolete. Maintenance of Balcrank Equipment is surprisingly low. All parts are quickly and easily accessible. For your convenience, Eighty Official Service Depots are located throughout the country.

The Lubrication Board that never grows obsolete—with Balcrank's exclusive convertible features—interchangeable name plates and gun hangers.

Balcrank's exclusive Lever-Push hand Lubricators—interchangeable to high, low, and medium pressure—popular everywhere.



Balcrank's efficient one-pound, one-man power gun. The "CZA" lubricator—standard equipment with leading major refiners.

The Exclusive Balcrank "Sid-E-Spout" Oil Can Opener and Funnel. Cuts through side of can—One unit for 1 and 5 quart cans.

BALCRANK quality products for over a quarter century CINCINNATI, OHIO

MERCHANDISING AT SERVICE STATIONS

(As Seen by N. P. N. From the Road)

Vegetable Stand at Station In Drouth Area Town

A new service station department, somewhat foreign to the general run of merchandise sold with gasoline and oil, has been started at the Iowa Independent Oil Co. station in Knoxville, Ia. It is a fruit and vegetable stand.

Last summer the thermometer rose above 100 degrees day after day and hot winds blew across the state, searing the fields and destroying gardens. Even after relief came the only green parts of the fields were those covered with weeds.

While the drouth was being discussed at the station one evening the idea came out of thin air that, with gardens withering, home gardeners would have to look elsewhere for foodstuffs.

J. A. Dennis, head of the company and an official of Dixie Distributors of Iowa, started the machinery for a fruit and vegetable stand. His trucking line moves food from Muscatine, Ia., and it is sold at the station.

The stand is on the lawn—or what was lawn before the drouth—bordering the service station drive. Food is on display in 14 bins across the front counter. Other food is on the shelf against the rear wall. Food is sold at retail and wholesale.

The stand proved to be a profitable enterprise. Customers stop to buy vegetables and food when coming to the station for gasoline, and new customers are added to the station's list via the fruit stand route.

—NPN—

Gauge Stick Wiped On White Napkin

White paper napkins are used at a Home Oil & Gas Co. service station in Cedar Rapids, Iowa, to wipe the crankcase gauge bayonet in checking the oil level.

The salesman pulls the gauge across the napkin, showing the level to the customer, and the darkness of the oil against the white background is suggestive of the need for an oil drain.

Napkins are kept in a metal holder on a window ledge, similar to holders used on restaurant tables.

—NPN—

Village Rebates Rest Rooms $3 a Year

Three dollars a year is what each rest room in a service station is worth to the general public, in the opinion of the town council of a small town in Michigan.

The Star Oil Co., Port Huron, who operate in a number of Michigan towns recently received a surprise letter from a village clerk, the text of which follows:

"We are in receipt of your check for $7.43 in payment of water bill from Jan. 1 to July 1, 1934 at your station here, less 5 per cent discount.

"At the July meeting of the common council a resolution was passed giving oil stations having public rest rooms a rebate of $3 per year for each rest room, effective July 1. Accordingly we are refunding you for two rest rooms for six months . . . . "

—NPN—

Not Knowing the Price Fouled Another Sale

Having to ask the "boss" the price of a specialty is not a sales builder. This was demonstrated recently when we drove into one of the stations of a company operating extensively in the middle west.

We had a friend with us. While the attendants were servicing the car the friend spied an insecticide. He went over and picked up the can, shook it, and turned to one of the attendants with the usual query: "How much is this?"

"Hey, Bill," shouted the attendant to the "boss" standing in the doorway, "How much is this stuff?"

"Thirty cents," Bill shouted back. "Thirty cents," echoed the attendant.

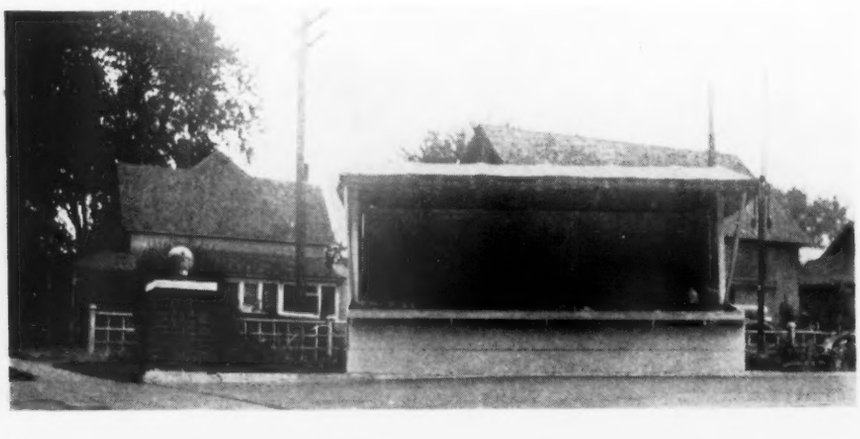
"That include the spray gun?"

"I don't know—hey Bill, that include the spray gun?"

"Naw, fifty-five cents for the whole thing."

"Let you have the whole thing for fifty-five cents," the attendant offered.

Bill never offered to exert any salesmanship. He was still holding up the door casing when the friend carefully replaced the can of insecticide in its place on the display cabinet.



THIS NEW GENERAL MOTORS TRUCK

AT ONLY $925

CHASSIS
f. o. b. PONTIAC

Are the loads you're called upon to haul in the 3-ton range? If so, you'll want to know more about the new General Motors 3-ton truck.

To begin with, its price is exceptionally low—only $925 (chassis f. o. b. Pontiac). But that's only part of the story. In its ability to do more work, and save or earn more money, it's a downright value if there ever was one. There isn't an ounce of untried material in its rugged makeup. Nor a single untried engineering principle in its modern design. In short, it's a General Motors "engineered for the job" truck with the power, the stamina and the economy that thousands of experienced truck owners have come to expect from any truck bearing the GMC nameplate.

See this 3-ton truck or any one of the many other General Motors trucks or tractors from 1½ to 22 tons. There's one to fit your needs *exactly*. And there are facts to prove that it will be a more profitable investment.

GENERAL MOTORS TRUCKS and Trailers

GENERAL MOTORS TRUCK COMPANY — *Time Payments Available Through Our Own Y. M. A. C.* — **PONTIAC, MICHIGAN**

Refinery --- Tank Wagon Markets

Uncertainty Dominates Market Activities

CLEVELAND, Sept. 4

PRICE recessions outnumbered price gains in both refinery and retail gasoline markets east of the Rocky Mountains in the last week of August. All in all it appeared to be a week of backsliding for oil markets. The element of uncertainty continued to dominate market activities.

With the settlement of retail price wars in some areas, new price wars bobbed up in others despite the stabilization efforts which were under way in all parts of the country. Washington, D. C. retail prices were restored to normal with an advance of 4.8 cents a gallon by major companies. Fort Worth and Dallas prices appeared to be on the mend but these three were the only bright spots in the retail market situation. On the downside there was a 0.5-cent cut in prices throughout Ohio by Standard Oil Co. of Ohio Aug. 29, and the eastern seaboard territory was spotted with new price cuts. Prices were dropped 4.5 cents at Wilmington, Del. and 4 cents at New Bedford, Mass. Reductions of 0.3 to 1 cent per gallon were numerous in sections of Vermont, New Hampshire and Maine.

The market structure for Mid-Continent gasoline as a whole remained fairly steady. Slight price recessions were reported in one or two districts as refiners elected to meet the competition of low-priced "illegal" gasoline from East Texas. Offerings of alleged "hot" gasoline were reported from East Texas at as low as 3.125 cents, Group 3, for low octane material. The high octane grades of gasoline were closely held in most parts of the Mid-Continent.

Natural gasoline was unsteady in the Mid-Continent and kerosine was only moderately active. Prices of both commodities were easy. Furnace oil was the most active product. Northern buyers were endeavoring to cover on their requirements for the coming season and demand for shipment to the Gulf and thence coastwise also was active. Prices were tending higher and the firmness of furnace oil was tending to bolster the market for kerosine.

Disturbances in retail markets caused 0.25-cent reductions in bargelot gasoline prices in the key markets of the north section of the eastern seaboard. Kerosine prices and quotations for Nos. 3 and 4 heating oils also were down 0.25 cent in the northern seaboard districts.

A substantial drop in movement of gasoline was reported by Pennsylvania refiners following the 0.5-cent cut in Ohio retail prices. Ordinary U. S. Motor gasoline was down 0.125 cent and the high octane grades were tending lower. Kerosine was more active with prices tending higher.

Lubricating oils were quiet in all markets. Prices were barely holding their own. Considerable price cutting in motor oils was reported from Pennsylvania but bright stocks and neutral oils, quoted as such, were fairly steady.

Wax prices continued to rally in all markets.

Injunction Activities Keep Chicago Market Unsettled

Staff Special

CHICAGO, Sept. 1

INJUNCTION activities in East Texas tended to disrupt orderly trading in the Chicago market the week ended Sept. 1.

Trading in speculative circles was virtually nil, with buyers and sellers on a hand-to-mouth basis.

It was apparent early in the week that gasoline originating in the East Texas field again was becoming a disturbing factor in the Chicago market. This gasoline was being offered by resellers at extremely low prices. It was thought in most quarters that the legality of this material could not be proved, and that it was being shipped under the protection of the injunctive action taken on the part of 11 refiners against the Texas commission's regulations and the reported virtual embargo by the railroads.

However, later in the week the commission again had the situation in hand by virtue of its counter injunction.

Summary of Group 3 Quotations for U. S. Motor Gasoline
In Effect September 4, 1934

	62 Octane and Below	63-70 Octane No.	71 Octane and Above
Okla.	3.75-4.00	4.625-5.00	.....
Kans.	3.875-4.00	4.75-4.875	.....
N. Tex.	3.75-3.875	4.50-4.75	.....
W. Tex.	3.75-3.875	4.625-4.75	.....
*E. Tex.	3.75-3.875	4.50-4.75	.....
La.-Ark.	3.75-3.875	4.625-4.75	.....

Prices are those quoted on the basis of f.o.b. Group 3 by refiners in the districts designated.

*From legally produced crude.

Most traders late Aug. 31 and Sept. 1 again were finding it virtually impossible to get shipments, with any degree of certainty, from refiners of "hot" or "bargain" gasoline.

The market for gasoline over which there was no doubt as to its legality was riding along steadily at generally unchanged prices, although its position was jeopardized to some extent by offers of cheap gasoline. Some sellers of legal gasoline were reported to be meeting competition.

The attention of most traders was focused on the week-end holiday. They reported that buying in anticipation of Labor Day demand had been only fair from open market buyers. It was thought generally that there would be a more active demand after the holiday from buyers to replace their depleted storage. Demand from contract

buyers was reported good most of the week.

The higher octane gasolines were on an even keel throughout the week.

Kerosine was rather a dead issue in the Chicago market. Sales were reported at shaded prices.

Heating oils, especially the No. 1 and 2 grades, were exceptionally tight as it became apparent that unless more oil originating in the East Texas district became available to Chicago sellers a shortage would result. Reports as present generally were that the East Texas furnace oil now available is moving on coastwise orders. With freight rates taken into consideration this material can move more advantageously to Gulf ports than material from other refining districts. Most sellers expect this market to remain tight until East Texas material again becomes a factor. Some Chicago sellers were reported to be trying to cover short sales.

Heavy fuel oils were quiet, with industrial demand reported light.

Mid-Continent Refinery Markets

Uncertainty Continues To Dominate Trading

Staff Special
TULSA, Sept. 1

UNCERTAINTY as to the status of the Texas Railroad Commission orders requiring approved tenders on shipments of petroleum products from East Texas continued to keep Mid-Continent markets in an unsettled state the last week in August.

The postponement of the hearing for permanent injunctions against operation of the commission's orders until Sept. 4, further delayed an actual show-down on this most vital issue. For many East Texas refiners, the postponement meant another week in which shipments of all products, whether legal or "hot," could be shipped with immunity.

During the early part of the week, shipments from refiners who had injunctions were fairly heavy. These shipments were consigned to contract customers and for open market disposal. Many suppliers took advantage of the postponement and cleaned up many of their over-the-month commitments long before their normal shipping time. Several East Texas refiners, anticipating an increase in gasoline buying due to the Labor Day holiday, put material in transit. If this increase in business fails to materialize, the gasoline is expected to harrass further the legitimate market.

The enlarged purchase plan, to be handled by the P. & C. Committee's Program Committee, was being watched closely. The plan calls for the purchase of "distress" gasoline east of the Rockies. Concern was evidenced among the trade as to just when the program would get under way. Approval, while expected momentarily, has not materialized.

Members of the Program Committee were quoted as of the opinion that the increase in consumption over Labor Day would absorb any distress

Chicago Tank Car Market

Following prices are in cents per gallon, except fuel oil in barrels, in tank car lots, representing majority of sales to jobbers on Group 3 freight basis, although shipments may originate in other refining districts, such as North, West and East Texas, Louisiana, Arkansas, Indiana, Illinois, Kentucky, etc. Prices do not include state or federal taxes levied on some products.

	Prices Sept. 4	Prices August 27	Prices August 20
U. S. Motor Gasoline, by octane numbers:			
62 and below	3.75 – 4.00	3.75 – 4.00	3.75 – 4.00
63-70	4.50 – 4.875	4.50 – 4.875	4.50 – 4.75
71 and above	.....	.....	4.875– 5.00
60-62, 400 e.p. gasoline	3.875– 4.125	3.875– 4.125	4.25 – 4.375
64-66, 375 e.p. gasoline	4.25 – 4.375	4.25 – 4.375	3.875– 4.125
68-70, 350-360 e.p. gasoline	4.375– 4.50	4.375– 4.50	4.375– 4.50
41-43 water white kerosine	3.00 – 3.25	3.00 – 3.25	3.125– 3.25
42-44 water white kerosine	3.125– 3.375	3.125– 3.375	3.25 – 3.375

	Sept. 4		August 27	
Fuel and Gas Oils:	Domestic	Industrial	Domestic	Industrial
No. 1, white	2.625– 2.875	.....	2.625– 2.875	.....
No. 1, straw	2.625– 2.875	.....	2.625– 2.875	.....
No. 2, dark	2.50 – 2.625	.....	2.50 – 2.625	.....
No. 2, straw	2.50 – 2.625	.....	2.50 – 2.625	.....
No. 3	2.375– 2.50	.....	2.375– 2.50	.....
No. 4	$0.90 –$0.925	$0.875–$0.90	$0.90 –$0.925	$0.875–$0.90
U.G.I., gas oil	.....	2.00 – 2.125	.....	2.00 – 2.125
No. 5	$0.625–$0.65	$0.60 –$0.65	$0.625–$0.65	$0.60 –$0.65
No. 6	.....	$0.50 –$0.525	.....	$0.50 –$0.525

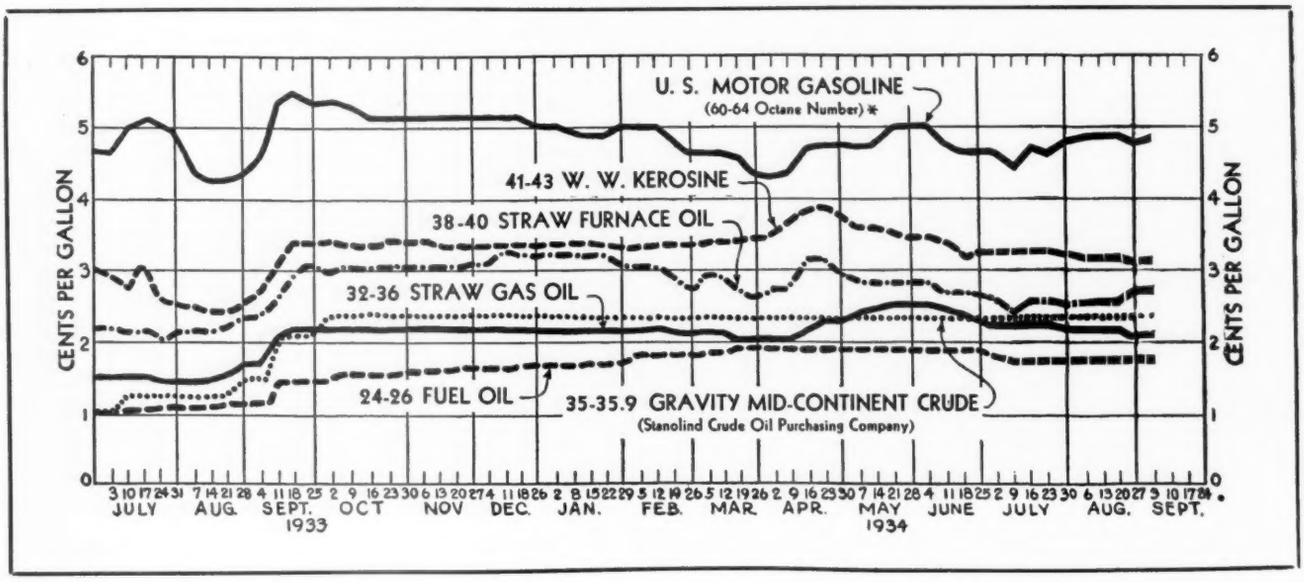
Naphtha and Solvent

(Prices are in cents per gallon, in tank car lots, as quoted by Chicago sellers f.o.b. Group 3 Basis)

	Sept. 4	August 27	August 20
Stoddard Solvent	6.375	6.375	6.375
V. M. & P. Naphtha	6.875	6.875	6.875
Cleaners Naphtha	6.875	6.875	6.875
Oleum Spirits	5.875	5.875	5.875
Rubber Solvent	6.875	6.875	6.875
Lacquer Diluent	7.875	7.875	7.875

Barometer of Mid-Continent Refinery Market

Charted Course of Prices of Crude and Principal Refined Products, Week by Week


U. S. MOTOR GASOLINE
(60-64 Octane Number) *
41-43 W. W. KEROSINE
38-40 STRAW FURNACE OIL
32-36 STRAW GAS OIL
24-26 FUEL OIL
35-35.9 GRAVITY MID-CONTINENT CRUDE
(Stanolind Crude Oil Purchasing Company)
CENTS PER GALLON
CENTS PER GALLON
JULY AUG. SEPT. OCT NOV DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT.
1933
1934

*Changed to 63-70 Octane Number Aug. 6, 1934.

gasoline that might crop up. There was doubt as to whether there would be any material increase in open market buying as a result of the holiday. If this increase fails to materialize and the program does not start functioning immediately there were those who expected the market structure to be effected.

The granting of injunctions to the Texas Railroad Commission against several East Texas refiners and four railroads, however, eased the situation somewhat the latter part of the week. The end of the week, the commission held the upper hand and had injunctive power to require most East Texas refiners to furnish approved tenders and also power to require railroads to reject shipments not accompanied by tenders.

With East Texas refiners again blocked against the shipping of products without tenders, the situation took on a brighter outlook. There was more likelihood, it was reported, of the market continuing at present price levels even if the enlarged buying program does not become operative at once. The elimination of "injunction gasoline" at cheap prices, it was thought, would lessen the competition legitimate refiners would encounter. The lack of this "injunction gasoline," if present conditions continue, probably would enable some refiners in other districts to relieve their burdensome stocks.

The market structure for Mid-Continent gasoline as a whole remained fairly steady. Slight price recessions were reported in a district or two.

Offerings of U. S. Motor gasoline from East Texas, labeled "injunction gasoline" and in some cases "hot," were free at 3.25 cents, Group 3. The middle of the week quotations as low as 3.125 cents were encountered. Most offerings, however, were withdrawn when the Texas commission obtained its injunction against the East Texas refiners.

High octane gasoline was reported difficult to obtain in many areas.

Increase in farming activity in the middle west evidently has not been sufficiently pronounced to start an upward move in prices for kerosine. Spotty activity was reported, but as a whole shipments continued only fair.

Furnace oil was the most active commodity in the Mid-Continent. Northern buyers were endeavoring to cover their requirements for the coming season, but reported some difficulty in doing so. Refiners continued to hold their production, confident that increases in price within the next few weeks would warrant carrying the stocks. Shipments from East Texas for movement to the east coast were brisk. Repeated offers to buy, in many cases at higher prices, caused refiners to advance their prices. Oklahoma and North Texas refiners were holding their prime white grade at 2.625 cents and up. East Texas refiners were accepting little northern business, but indicated prices of 2.625 cents might bring out a little material.

The summer slump in movement of zero gas oil was reported at an end. Refiners were of the opinion that inquiries and orders placed the last few days indicated the re-entry of buyers in the market for next season. Quotations for the low cold test gas oil were up 0.125 cent in several districts.

Natural gasoline was somewhat unsteady. Most of the unsteadiness was in the low vapor pressure grades. These grades, however, were having some influence on grade 26-70. With the trend definitely toward high vapor pressure natural for use as a blending stock, the price structure for the 18 and 22-pound grades has become wobbly. The 22 pound material was offered on a parity with 26-70. Prices for the 18-pound also were unusually low.

In spite of these factors the market price for 26-70 remained at 3 cents. There were indications late in the week that the Texas price was not quite so steady as that in Oklahoma.

Mid-Continent wax showed signs of increased activity. Advances of 0.125 to 0.25 cent resulted. Black oil remained pegged at 3 to 3.25 cents. Lubricating oils showed little change.

Prices A Year Ago

September 4, 1933

	Oklahoma	Penna.
U. S. Motor (60-64 Octane in Okla. Min. 60 Octane in Pa.)	4.50-4.75c	6.125-6.25c
Grade 26-70 Natural Gasoline	3.50c	.....
Kerosine (Okla. 41-43; Pa. 47 w.w.)	2.625-2.75c	4.50-4.625c
Fuel Oil (Okla. 24-26; Pa. 36-40)	$0.475-$0.525	3.50-3.625c
Crude (Okla. 35-35.9)	$0.62	$2.17
Chicago tank wagon (including 3c state, 1.5c federal tax)		16.3c

Eastern Domestic Markets

New Price Wars Threaten Wholesale Markets

Staff Special

NEW YORK, Sept. 1

GASOLINE markets along the Atlantic seaboard were unsettled during the week ended Sept. 1 by sharp reductions in key retail markets and increased cloudiness of the wholesale situation. Conjecture was rampant as to the effect of the proposed stabilization program and buyers and sellers alike were pretty much on the fence. Opinion was divided as to the near future trend of oil prices. Some were inclined to hold their products for higher markets while others made scattered offerings to the jobber trade at attractive prices.

Retail markets experienced substantial reductions in heretofore normal areas. Service station prices at New Bedford, Mass., were cut 4 cents early in the week. Stabilization work in Providence and Boston continued slowly because of the proximity of these markets to unsettled areas.

Third-grade gasoline was eliminated by several major marketers in sections of Vermont, New Hampshire and Maine, and regular grade gasoline was reduced in amounts varying from 0.3 to 1 cent per gallon.

At Wlimington, Del., service station prices were reduced 4.5 cents late in the week. The Washington, D. C., market improved somewhat but had not recovered very much of the ground lost several weeks ago.

Gasoline was offered 0.25-cent lower at New York harbor to barge buyers. Tank car prices were fairly steady at unchanged levels. Jobbers continued buying on a hand-to-mouth basis except where prices were attractive.

Baltimore and Philadelphia gasoline markets were generally unchanged. Demand was light. Wholesale markets for this product in New England likewise were unchanged. Tank car shipments were fair to good.

Several leading suppliers reduced kerosine 0.25 cent to 5.25 cents at New York harbor, Providence and Boston, and 5.5 cents at Portland. Competition for gallonage in the tank wagon markets was given as the reason for these reductions.

Heating oils were not in demand and prices tended to sag. The Nos. 3 and 4 oils were offered more freely at prices 0.25 cent lower.

Bunker oil and diesel oil were generally unchanged at $1.30 and $1.95 respectively, in the key markets. Occasional sales were reported at under these prices but the general level was not changed.

Buying of cargo lots at the Gulf was at a standstill throughout the week. Both foreign and domestic inquiry was held in abeyance pending the operation of the stabilization program. Improvement in the Roumanian market was reported, but little influence on American export markets was noted. Prices for all commodities were generally unchanged.

Values Texas Pipelines

AUSTIN, Sept. 1.—Intangible values on pipelines as certified by the state tax commissioner totaled $64,999,980. The state expects to realize about $500,000 in taxes on this basis.

California Refinery Market

Posted Prices For Heating Oils Advanced

LOS ANGELES, Aug. 31

NOTABLE features of the past week in Pacific Coast petroleum markets were readjustments of wholesale and retail gasoline prices and the posting of prices for fuel oil, gas oil and kerosine-distillate by the Pacific Coast Petroleum Agency. Details of these price changes are given elsewhere in this issue.

Changes in bulk gasoline prices came too late in the week to show any appreciable effect on sales but indications were that the result might be a slight increase in the quantity of independent competitive gasoline sold outside the Agency agreement.

Although early in the week tank wagon prices on competitive and third-grade gasolines for delivery to points in the Los Angeles Basin area were generally well maintained at the established price of 12.5 cents a gallon, inclusive of 4 cents tax, allegations of occasional undercutting became more frequent. With the tentative advance of the tank wagon price in this area to 13 cents a gallon on Aug. 31, the danger of secret rebates increased.

Spot sales of gasoline to points outside the state were few, chiefly because of Mid-Continent competition. The outlook for an increase in out-of-state sales by Los Angeles Basin refineries was not improved by the advance in bulk prices.

Natural gasoline prices advanced in sympathy with refined gasoline quotations and in anticipation of an increased demand in the near future. Quotations on this product ranged from 7 to 7.25 cents a gallon, delivered at refineries.

Fuel oil demand for agricultural and industrial purposes was reported somewhat better than in recent months, due to seasonal activities. Prospects were considered good for further improvements, especially in the San Joaquin Valley.

Shipments of fuel oil to Pacific foreign ports, chiefly under contract, continued heavy with indications that the next few months would register considerable increases in the quantities transferred to the Atlantic seaboard.

Pacific Coast seaboard markets were quiet, although moderate activity was reported in shipments to the Orient, especially in kerosine-distillate stock, of which about 2000 tons was booked for shipment within the past two weeks at about 4.25 cents a gallon, f.o.b. vessel. Continued seasonal activity in this product, particularly to the Chinese market, was anticipated for the remainder of the year.

Exporters received a fair number of inquiries from Pacific foreign ports for cased kerosine and gasoline. Some business resulted, at prices unchanged from those previously quoted.

No important changes were noted in other petroleum products.

Wax Markets

Demand Increases

NEW YORK, Sept. 1.—Wax markets at New York and New Orleans improved during the week ended Sept. 1. Prices were steady generally with quotations advanced slightly by several suppliers. Demand increased and stocks were in better shape. The 124-126 A.m.p. grade changed hands in a few transactions at 3.25 cents in both markets.

The improvement in scale waxes steadied the fully refined list. Prices for the latter were generally unchanged. Many observers believed that an upward trend of prices was beginning. Reduced crude runs were mentioned by refiners as their reason for more optimistic views.

YOU wouldn't risk welding the tank of a truck that you knew hadn't been gas-freed. Why take chances with ordinary extinguishers that you know will not put out all of the kinds of fires that occur at bulk plants?

LUX extinguishers put out all the fires that foam and carbon tetrachloride extinguishers put out and more besides. LUX is effective against fires in gasoline pouring from a leaking pipe or overflowing tank truck against which foam and carbon tetrachloride fail. LUX also puts out fires in oil or gasoline burning on a surface and fires in electrical apparatus. No other type of extinguisher is effective against all three.

Besides greater effectiveness LUX extinguishers do not require annual refilling as other types of extinguishers do. They will not freeze and can be left on the loading racks or at other exposed points during the coldest winter weather.

You cannot predict what kind of a fire will break out on a truck or at a bulk plant. And only with LUX will you have the most complete protection that an extinguisher can give. Why take chances with anything less?

Write Walter Kidde & Company, Inc., 62 West Street, Bloomfield, N. J. for complete information.

LUX **Effective Fire Protection for Refineries—Bulk Plants—Trucks**

Pennsylvania Markets

Price Movements Erratic

CLEVELAND, Sept. 4.—Price movements were somewhat erratic in the western Pennsylvania refinery market the last week in August. Quotations for some commodities were up slightly and others were down. Month-end business was unusually light taking the refined oil list as a whole although there was renewed activity in one or two items.

Gasoline was easier in all parts of the field and prices for ordinary U. S. Motor were off 0.125 cent. The 0.5-cent cut in Ohio retail prices was quite a blow to Pennsylvania refiners. Many of them have marginal contracts calling for high octane gasoline on which the netback is around 5 cents as against an open market price of around 6.75 cents. Open market prices for the high octane grades showed signs of slipping as the week ended.

Kerosine movement increased and prices were gradually firming up. Some refiners, in fact, advanced their kerosine quotations 0.125 to 0.25 cent but there was still quite a substantial quantity of low-priced material in the hands of resale agents and, in the effort to get shipping instructions before the end of the month, some price shading was indulged in. This kept the general market from advancing.

While fuel oil was still available at 3.625 cents in some spots in the upper field, several sizeable sales were reported at 3.75 cents and by the end of the week the majority of refiners were quoting this figure as minimum. The upper field price gained 0.125 cent over the week. Most of the new buying came from industrial accounts in New York State although there was some increase in buying of domestic heating oils.

Lubricating oils were comparatively quiet. Some refiners were asking higher prices for cylinder stocks. Following the 0.5-cent advance in prices the third week in August, however, new offerings of cylinder stock began to appear on the market and this tended to check, at least temporarily, a further upward move in prices which some refiners had been anticipating.

Bright stock was quiet outside of inter-refinery trading. Neutral oils were comparatively steady and continued to be closely held. There were widespread reports of motor oil price cutting, particularly from the eastern buying centers, with offerings reported on the basis of considerably under prices quoted for straight bright stock or neutral oil.

Wax prices advanced 0.2 cent a pound on increased buying from eastern exporters.

THESE GASOLINE

ANTIOXIDANTS

solve the stabilization problem for the Small Refinery

So that the small refiner may profitably adopt the new refining process made possible by the use of gasoline antioxidants there have been developed the following: Du Pont Gasoline Antioxidant No. 3 (Methanol solution of Monobenzyl-para-Aminophenol), Du Pont Gasoline Antioxidant No. 4 (Methanol solution of Dibenzyl-para-Aminophenol) and Du Pont Gasoline Antioxidant No. 5 (Ethyl Alcohol solution of Monobenzyl-para-Aminophenol).

These solutions may be used in refineries where the volume of consumption does not justify the installation of special equipment for incorporating solid inhibitors into gasoline. Also, wherever the refiner prefers the liquid to the solid form, even at low temperatures, these antioxidants remain in solution.

And best of all, they offer the following money-saving benefits, which demonstrate their superiority over the old sulfuric acid washing method of stabilizing cracked gasolines:

1—Effective, economical insurance against gum formation.

2—Reduction or elimination of acid washing costs.

3—Higher yields of gasoline due to minimizing acid treatment losses.

4—Maximum preservation of anti-knock properties.

5—Saving of redistillation expense.

6—High degree of color stability.

7—Decreased manufacturing costs without sacrifice of quality.

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Organic Chemicals Dept., Wilmington, Del.
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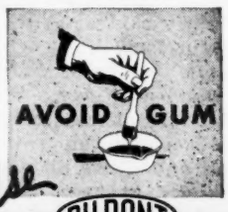


Use DU PONT **ANTIOXIDANTS**

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

They do not represent inter-refinery sales or sales made for export.

Tank car prices do not include state or federal taxes levied on some products.

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

	Prices Sept. 4	Prices Aug. 27	Prices Aug. 20
OKLAHOMA (F. o. b. Oklahoma refineries)			
50-52, 450 e.p. naphtha..	3.625– 3.875	3.75 – 3.875	4.00 – 4.125
U. S. Motor Gasoline			
62 octane and below...	3.75 – 4.00	3.875– 4.00	4.00 – 4.25
63-70 octane number...	4.625– 5.00	4.625– 5.00	4.75 – 5.00
71 octane and above...	.....	.....	5.125– 5.25
60-62, 400 e.p. Gasoline..	3.75 – 4.125	3.875– 4.125	4.125– 4.25
64-66, 375 e.p. Gasoline..	4.25 – 4.375	4.25 – 4.375	4.375– 4.50
68-70, 350-360 e.p. gasoline	4.375– 4.50	4.375– 4.50	4.50 – 4.625

WESTERN PENNSYLVANIA (Quotations and/or sales prices to car unloaders)

	Prices Sept. 4	
	Bradford-Warren	Other Districts
52-54 Naphtha.....	5.50 – 5.625	5.375– 5.50
54-56 Naphtha.....	.....	5.50 – 5.625
Motor Gasoline:		
U. S. Motor (58-62°)..	5.625– 5.75	5.50 – 5.625
Minimum 60 octane...	6.25 – 6.375	6.25 – 6.375
Minimum 65 octane...	6.625– 6.75	6.625– 6.75
Minimum 70 octane...	6.875– 7.00	6.875– 7.00
64-66, 390 e.p. gasoline...	6.25 – 6.375	6.25 – 6.375
68-70, 350-360 e.p. gasoline.....	6.50 – 6.625	6.50 – 6.625

Prices	Sept. 4	Aug. 27	Aug. 20
CALIFORNIA (3c tax to be added to prices if used in state.)			
54-58 U.S. Motor, 437 e.p.	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00
54-58 U S. Motor, 437 e.p. for outside state shipment	6.50 – 7.50	6.50 – 7.50	6.50 – 7.50
58-61, 375-400 e.p. gasoline, 65 octane and above	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
42-45 Engine Distillate 445-480 e.p.....	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00
KANSAS (F. o. b. refinery, Kansas destination)			
U. S. Motor Gasoline			
62 octane and below...	4.00 – 4.125	4.00 – 4.125	4.25 – 4.375
63-70 octane number..	4.875– 5.00	4.875– 5.00	4.875– 5.00
71 octane and above...	.....	.....	5.125– 5.25
60-62 400 e.p. gasoline...	4.00 – 4.25	4.00 – 4.25	4.125– 4.25
NORTH TEXAS‡ (F. o. b. Wichita Falls district for unrestricted shipment; prices apply on products made from legally produced crude)			
U. S. Motor Gasoline			
62 octane and below...	3.75 – 3.875	3.75 – 4.00	3.875– 4.00
63-70 octane number...	4.50 – 4.75	4.50 – 4.75	4.50 – 4.625
71 octane and above...	.....	.....	4.625– 4.875
60-62 400 e.p. gasoline...	*3.75 – 4.00	3.875– 4.00	4.00 – 4.125
64-66 375 e.p. gasoline...	4.125– 4.25	4.25	4.25 – 4.375
68-70 350-360 e.p. gasoline	4.25 – 4.375	4.375	4.375– 4.50
WEST TEXAS‡ (F. o. b. West Texas refinery for unrestricted shipment; prices apply on products made from legally produced crude)			
U. S. Motor Gasoline			
62 octane and below...	3.75 – 3.875	3.75 – 4.00	3.875– 4.125
63-70 octane number..	4.625– 4.75	4.625– 4.75	4.625– 4.75
71 octane and above...	.....	.....	4.875– 5.00
EAST TEXAS‡ (F. o. b. West Texas refinery for unrestricted shipment; prices apply on products made from legally produced crude)			
U. S. Motor Gasoline			
62 octane and below...	3.75 – 3.875	3.75 – 4.00	3.875– 4.00
63-70 octane number..	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
71 octane and above...	.....	.....	4.625– 4.875
60-62, 400 e.p. gasoline...	3.75 – 4.00	3.875– 4.00	3.875– 4.125
NORTH LOUISIANA (For Louisiana and Arkansas destination)			
U. S. Motor Gasoline			
62 octane and below...	4.25	4.25	4.25
63-70 octane number...	5.00	5.00	5.00
71 octane and above...	5.25	5.25	5.25
ARKANSAS (For Arkansas and Louisiana destination)			
U. S. Motor Gasoline			
62 octane and below...	4.25	4.25	4.25
63-70 octane number...	5.00	5.00	5.00
71 octane and above...	5.25	5.25	5.25

Note: Octane numbers shown above are determined by C. F. R. motor method. (A. S. T. M. D. 357 M 33 T.)

‡Refiners generally receive 0.25c to 0.5c per gallon more for gasoline and kerosine for local or differential territory shipment.

†Prices Nominal. ††Only one refiner Quoting. *Quotations only.

	Prices Sept. 4	Prices Aug. 27	Prices Aug. 20
OHIO (Quotations of S. O. Ohio. Delivered any point in Ohio.)			
U. S. Motor Gasoline....	7.375	7.375	7.00
Above 65 Octane number	7.625	7.625	7.25

NATURAL GASOLINE

(Prices f.o.b. Group 3 and Breckenridge represent majority of sales made on dates shown to blenders on the freight basis shown below, although shipments may originate in other manufacturing districts, such as East Texas, Panhandle, Southwest Texas and Kansas).

Grade 26-70..... (F. o. b. Group 3)	3.00	3.00	3.00
Grade 26-70..... (F. o. b. Breckenridge)	3.00	3.00	3.00
CALIFORNIA (F. o. b. plants in the Los Angeles basin)			
75-85, 375-390 e.p. for blending.....	7.00 – 7.25	6.75 – 7.00	6.75 – 7.00

BURNING OILS

WESTERN PENNSYLVANIA (Quotations and/or sales prices to car unloaders)

	Prices Sept. 4	
	Bradford-Warren	Other Districts
45 w.w. kerosine.....	4.375– 4.50	4.375– 4.50
46 w.w. kerosine.....	4.50 – 4.625	4.50 – 4.625
47 w.w. kerosine.....	4.625– 4.75	4.625– 4.75

Prices	Sept. 4	Aug. 27	Aug. 20
OKLAHOMA (F. o. b. Oklahoma refineries)			
41-43 w.w. kerosine.....	3.00 – 3.25	3.00 – 3.25	3.125– 3.25
42-44 w.w. kerosine.....	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
KANSAS (F. o. b. refinery Kansas destination)			
41-43 w.w. kerosine.....	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
42-44 w.w. kerosine.....	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
NORTH TEXAS‡ (F. o. b. Wichita Falls district for unrestricted shipment; prices apply on products made from legally produced crude)			
41-43 w.w. kerosine.....	3.125– 3.25	3.125– 3.25	3.125– 3.25
EAST TEXAS‡ (F. o. b. East Texas refiners for unrestricted shipment; prices apply on products made from legally produced crude)			
41-43 w.w. kerosine.....	2.875– 3.00	2.875– 3.00	2.875– 3.125
NORTH LOUISIANA (For Louisiana and Arkansas destination)			
41-43 w.w. kerosine.....	3.625	3.625	3.625
ARKANSAS (For Louisiana and Arkansas destination)			
41-43 w.w. kerosine.....	3.75	3.75	3.75
CALIFORNIA (F. o. b. California refineries)			
38-40 w.w. kerosine.....	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25

NEUTRAL OIL

WESTERN PENNSYLVANIA (Quotations and/or sales prices to car unloaders)

Vis.	Viscous Neutrals (Viscosity at 70° F.)		
200 (180 at 100) No. 3 color 420-425 flash:			
Zero pour test.....	29.50 –30.00	29.50 –30.00	29.50 –30.00
10 pour test.....	28.50 –29.00	28.50 –29.00	28.50 –29.00
15 pour test.....	28.00 –28.50	28.00 –28.50	28.00 –28.50
25 pour test.....	27.50 –28.00	27.50 –28.00	27.50 –28.00
180 No. 3 color, 410-415 flash:			
25 pour test.....	24.50 –25.00	24.50 –25.00	24.50 –25.00
150 No. 3 color, 400-405 flash:			
Zero pour test.....	23.00 –23.50	23.00 –23.50	23.00 –23.50
10 pour test.....	22.00 –22.50	22.00 –22.50	22.00 –22.50
15 pour test.....	21.50 –22.00	21.50 –22.00	21.50 –22.00
25 pour test.....	21.00 –21.50	21.00 –21.50	21.00 –21.50

SOUTH TEXAS (F. o. b South Texas refineries)

Vis. Color	(Viscosity at 100° F., pour test 0)		
100—No. 1½-2½ pale..	5.75	5.75	5.75
200—No. 2-3 Pale.....	7.50	7.50	7.50
300—No. 2-3 Pale.....	8.00	8.00	8.00
500—No. 2½-3½ Pale..	9.00	9.00	9.00
750—No. 3-4 Pale.....	9.50	9.50	9.50
1200—No. 3-4 Pale.....	10.00	10.00	10.00
2000—No. 3-4 Pale.....	10.25 –10.50	10.25	10.25
200—No. 5-6 Red Oil...	7.50	7.50	7.50
300—No. 5-6 Red Oil...	8.00	8.00	8.00
500—No. 5-6 Red Oil...	9.00	9.00	9.00
750—No. 5-6 Red Oil...	9.50	9.50	9.50
1200—No. 5-6 Red Oil...	10.00	10.00	10.00
2000—No. 5-6 Red Oil...	10.25 –10.50	10.25	10.25

Note: Red oil prices shown above cover oils with green cast, blue cast red oils are slightly lower in some cases.

Refinery Markets, Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted. They do not represent inter-refinery sales or sales made for export.

Tank car prices do not include state or federal taxes levied on some products.

(For quick reference to refinery Prices, get the OIL PRICE HANDBOOK, published annually)

Prices Sept. 4

****MID-CONTINENT (Vis. at 100° F.; F. o. b. Tulsa basis)**

Vis. Color	0 to 10 Pour Point	15 to 30 Pour Point
60-85	5.25	4.75
86-110	5.75	5.25
150—No. 3	10.00	9.00
150—No. 4	9.50	8.50
180—No. 3	11.25	10.25
180—No. 4	10.75	9.75
180—No. 5	10.25	9.25
200—No. 3	11.75	10.75
200—No. 4	11.25	10.25
200—No. 5	10.75	9.75
220—No. 3	12.75	11.75
220—No. 4	12.25	11.25
220—No. 5	11.75	10.75
240—No. 3	13.75	12.75
240—No. 4	13.25	12.25
240—No. 5	12.75	11.75
280—No. 3	14.75	13.75
280—No. 4	14.00	13.00
280—No. 5	13.50	12.50
300—No. 3	15.25	14.50
300—No. 5-6	13.25	13.00

CHICAGO (F. o. b. Chicago district refineries)

Prices Sept. 4

Vis. Color Pale Oils (Vis. at 100°F.		*15 to 30 Pour Point Vis. Color Red Oils	
60-85—No. 2	6.50		
86-110—No. 2	7.00	180—No. 5	10.25
140—No. 3	9.75	200—No. 5	10.75
160—No. 3	10.50	220—No. 5	11.75
180—No. 3	11.25	250—No. 5	12.75
200—No. 3	11.75	280—No. 5	13.50
250—No. 3	13.75	300—No. 5	14.00

***Oils with 0 to 10 pour point bring 1c higher than above prices. To above prices add 0.25c to obtain prices delivered in Chicago.**

CALIFORNIA (F. o. b. California refineries; Viscosity at 100°F.)

All neutral oil, 13.5c per gal. in tank car lots, and 15.5c in iron bbls. to jobbers only, excluding federal tax.

CYLINDER STOCKS

Prices	Sept. 4	Aug. 27	Aug. 20
MID-CONTINENT (F. o. b. Tulsa basis)			
(Prices represent Quotations and Sales)			
Bright Stocks:			
190-200 Vis. D at 210°	19.75	19.75	19.75
150-160 Vis. at 210°:			
0-10 cold test	17.00	17.00	17.00
10-25 cold test	16.50	16.50	16.50
25-40 cold test	16.00	16.00	16.00
150-160 Vis. E 210°	16.00	16.00	16.00
120 Vis. D, 210:			
0-10 cold test	15.50	15.50	15.50
10-25 cold test	15.00	15.00	15.00
25-40 cold test	14.50	14.50	14.50
600 St. Ref. Olive Green	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75
600 St. Ref. Dark Green	4.75 – 5.00	4.75 – 5.25	4.75– 5.25
631 Steam Refined	11.00	11.00	11.00
Black Oil	3.00 – 3.25	3.00 – 3.25	3.00 – 3.125
CHICAGO (F. o. b. Chicago district refineries)			
140 unfiltered	9.00	9.00	9.00
160 unfiltered	10.00	10.00	10.00
200 unfiltered	11.00	11.00	11.00
Bright stock, 160 vis. No. 8 color			
0 to 10 cold test	18.75	18.75	18.75
15 to 25 cold test	18.25	18.25	18.25
30 to 40 cold test	17.75	17.75	17.75
E filtered Cyl. Stock	15.50	15.50	15.50
WESTERN PENNSYLVANIA (A. S. T. M. Tests. Quotations/or and sales prices to car unloaders)			
600 Steam Refined	12.50 –13.00	12.50 –13.00	11.50 –12.00
650 Steam Refined	15.00 –15.50	15.00 –15.50	14.00 –14.50
600 Flash	16.00 –16.50	16.00 –16.50	15.00 –15.50
630 Flash	20.50 –21.00	20.50 –21.00	19.50 –20.00
600 Warren E	16.00 –16.50	16.00 –16.50	15.00 –15.50
Bright Stock, No. 8 color 140-150 vis. at 210°, 540-550 flash:			
10 pour test	21.50 –22.00	21.50 –22.00	21.50 –22.00
15 pour test	21.00 –21.50	21.00 –21.50	21.00 –21.50
20 pour test	20.50 –21.00	20.50 –21.00	20.50 –21.00
25 pour test	20.00 –21.00	20.00 –21.00	20.00 –20.50

PETROLATUMS

WESTERN PENNSYLVANIA (Per pound, in barrels, carload lots, f.o.b. Penna. refinery. In tank cars 0.5c per pound less. Quotations are from majority of petrolatum makers).

Snow White	7.375– 7.50	7.375– 7.50	7.375– 7.50
Lily White	6.375– 6.50	6.375– 6.50	6.375– 6.50
Cream White	5.375– 5.50	5.375– 5.50	5.375– 5.50
Light Amber	2.875– 3.00	2.875– 3.00	2.875– 3.00
Amber	2.625– 2.75	2.625– 2.75	2.625– 2.75
Red	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625

†Prices Nominal.

WAX

	Prices Sept. 4	Prices Aug. 27	Prices Aug. 20
WESTERN PENNSYLVANIA (Per pound, F. o. b. New York)			
122-124 white crude scale a.m.p.	2.95 – 3.00	2.85 – 2.90	2.90 – 3.00
124-126 white crude scale a.m.p.	3.00	2.90 – 2.95	2.95 – 3.05
****OKLAHOMA (Per pound in barrels; in a few instances, per pound in burlap bags; F. o. b. Oklahoma refineries.)**			
124-126 white crude scale a.m.p.	3.00 – 3.125	2.875– 3.00	2.875 – 3.125
CHICAGO (F. o. b. Chicago district refineries, in cents per pound, in bags, carload lots. Melting points are A.S.T.M method· add 3° F. to convert into A.M.P.)			
122-124 fully refined	4.90 – 5.00	4.90 – 5.00	4.90 – 5.00
125-127 fully refined	5.15 – 5.25	5.15 – 5.25	5.15 – 5.25
127-129 fully refined	5.30 – 5.40	5.30 – 5.40	5.30 – 5.40
130-132 fully refined	5.90 – 6.00	5.90 – 6.00	5.90 – 6.00
132-134 fully refined	6.15 – 6.25	6.15 – 6.25	6.15 – 6.25
135-137 fully refined	6.90 – 7.00	6.90 – 7.00	6.90 – 7.00

GAS AND FUEL OIL

WESTERN PENNSYLVANIA (Quotations and/or sales prices to car unloaders.)

Prices Sept. 4

	Bradford-Warren	Other Districts
36-40 fuel oil	3.75 – 3.875	3.625– 3.75

Prices	Sept. 4	Aug. 27	Aug. 20
OKLAHOMA (F. o. b. Oklahoma refineries)			
38-40 straw furnace Oil	2.625– 2.75	2.625– 2.75	2.50 – 2.625
32-36 straw gas oil	2.00 – 2.125	2.00 – 2.125	2.125– 2.25
32-36 straw gas oil zero	2.50 – 2.625	2.50	2.50
32-36 dark gas oil	2.00 – 2.125	2.00 – 2.125	2.125– 2.25
32-36 dark gas oil zero	2.50	2.375– 2.50	2.375– 2.50
28-30 fuel oil, zero (per bbl.)	$1.00 –$1.025	$1.00 –$1.025	$1.00 –$1.025
28-30 fuel oil (per bbl.)	$0.90	$0.90	$0.90
24-26 fuel oil (per bbl.)	$0.725–$0.75	$0.725–$0.75	$0.725–$0.75
22-26 fuel oil (per bbl.)	$0.70 –$0.75	$0.70 –$0.75	$0.70 –$0.75
18-22 fuel oil (per bbl.)	$0.70 –$0.725	$0.70 –$0.725	$0.70 –$0.725
16-20 fuel oil (per bbl.)	$0.65 –$0.70	$0.65 –$0.70	$0.65 –$0.70
14-16 fuel oil (per bbl.)	$0.65 –$0.675	$0.65 –$0.675	$0.65 –$0.675
KANSAS (F. o. b. refinery Kansas destination)			
38-40 straw furnace Oil	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
18-22 fuel oil (per bbl.)	$0.80 –$0.825	$0.80 –$0.825	$0.80 –$0.825
10-14 fuel oil (per bbl.)	$0.675–$0.70	$0.675–$0.70	$0.725–$0.75
NORTH TEXAS (F. o. b. Wichita Falls district refineries for unrestricted shipment; prices apply on products made from legally produced crude)			
38-40 straw furnace Oil	2.625	2.50	2.50
38-40 prime white Furnace Oil	2.75	2.625– 2.75	2.50 – 2.625
32-36 gas oil, zero	2.50 – 2.625	2.50	2.375– 2.50
32-36 gas oil	2.00 – 2.125	2.00 – 2.125	2.125– 2.25
24-26 fuel oil (per bbl.)	$0.75 –$0.775	$0.75 –$0.775	$0.775–$0.80
18-22 fuel oil (per bbl.)	$0.675–$0.70	$0.675–$0.70	$0.70 –$0.725
WEST TEXAS (F. o. b. West Texas refineries for unrestricted shipment; prices apply on products made from legally produced crude)			
32-36 gas oil, zero	2.50 – 2.625	2.375– 2.50	2.375– 2.50
18-22 fuel oil (per bbl.)	$0.625–$0.675	$0.625–$0.675	$0.625–$0.675
EAST TEXAS (F. o. b. East Texas refineries for unrestricted shipment prices apply on products made from legally produced crude)			
38-40 p.w. furnace oil	2.625	2.50 – 2.625	2.50 – 2.625
32-36 gas oil	1.625– 1.75	1.625– 1.75	1.75 – 1.875
20-24 fuel oil	$0.375–$0.425	$0.375–$0.425	$0.425–$0.45
NORTH LOUISIANA (For Louisiana and Arkansas destination)			
32-36 gas oil	2.625– 2.75	2.625– 2.75	2.625– 2.75
32-36 gas oil, zero	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
20-24 fuel oil	$0.95	$0.95	$0.95
16-20 fuel oil	$0.80 –$0.85	$0.80	$0.80
10-14 fuel oil	$0.70 –$0.75	$0.70 –$0.75	$0.70 –$0.75
ARKANSAS (For Arkansas and Louisiana destination)			
32-36 gas oil	2.625– 2.75	2.625– 2.75	2.625– 2.75
32-36 gas oil, zero	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
28-30 gas oil, zero	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
20-24 fuel oil (per bbl.)	$0.85 –$0.90	$0.85 –$0.90	$0.85 –$0.90
16-20 fuel oil	$0.75 –$0.80	$0.75 –$0.80	$0.75 –$0.80
10-14 fuel oil	$0.625–$0.65	$0.625–$0.65	$0.625–$0.65
CALIFORNIA* (F. o. b. San Joaquin Valley)			
14-18 fuel oil (per bbl.)	$0.60 –$0.65	$0.60 –$0.65	$0.60 –$0.65
14-18 bunker oil (per bbl.)	$0.60 –$0.70	$0.60 –$0.70	$0.60 –$0.70
30-34 gas oil (per bbl.)	$1.00 –$1.15	$1.00 –$1.15	$1.00 –$1.15
27 Plus diesel oil (per bbl.)	$1.05 –$1.15	$1.05 –$1.15	$1.05 –$1.15

***Nominal pipe line charge to San Francisco, 24c per bbl. more, and to San Pedro, 20c per bbl. more.**

Tank Wagon, Service Station Markets for Gasoline and Kerosine

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

Tax column includes 1c federal tax, state gasoline tax; also city and county taxes as indicated in footnotes

These Prices in Effect September 3, 1934, as Posted by Principal Marketing Companies

Latest Changes in Tank Wagon Markets

Motor Gasoline

S. O. New Jersey—Essolene: S.s. cut 3.8c, Washington, to 13c, **Aug. 15;** cut 1c to 12c, **Aug. 16.**

S. O. New York—Socony: Dealer, t.w. and s.s. cut 9.3c, Concord, to 11.5c, 19c and 20c, **Aug. 24.**

Dealer, t.w. and s.s. cut 0.7c, Manchester, to 11c, 18.5c and 19.5c, **Aug. 24.**

Atlantic Refining — White Flash Plus: T.w. and s.s. cut 3.5c, Wilmington, Del., to 12c and 14c, **Aug. 30.**

T.w. and s.s. up 2c, Boston, to 14c and 16c, **Aug. 22.**

T.w. and s.s. up 4c, Fall River, to 14.5c and 16.5c, **Aug. 13.**

T.w. and s.s. up 2c, Providence, to 12c and 14c, **Aug. 24.**

S. O. Ohio — Sohio X-70 and Renown: T.w. and s.s. cut 0.5c, thru Ohio, including all depressed areas, **Aug. 29.** X-70 statewide prices became 15.5c t.w. and 17.5c s.s., and Renown, 15c and 16c, including 5c tax.

Posted resellers' t.w. prices in depressed areas also cut 0.5c, these areas including counties of Allen, Butler, Champaign, Clark, Darke, Hamilton, Miami, Montgomery and Preble.

Sohio X-70 and **Renown** t.w. cut 1c, thru Hamilton county, to 13.5c, **Aug. 30.** S.s. unchanged for both grades at 15.5c.

S. O. Kentucky—Crown: T.w. cut 1c and s.s. cut 2c, Covington, to 16c and 17c, **Aug. 23.**

Kyso: T.w. cut 1c and s.s. cut 2c, Covington, to 14.5c and 15.5c, **Aug. 23.**

T.w. and s.s. cut 0.5c, Montgomery, to 19.5c and 21.5c, **Aug. 24.**

S. O. Indiana—Red Crown: S.s. cut 1c, Milwaukee, to 18.1c, **Aug. 25;** s.s. cut 0.6c, to 17.5c, **Aug. 28;** s.s. cut 1.3c, to 16.2c, **Aug. 30;** T.w. cut 1.6c, to 15.5c, **Aug. 28.**

Stanolind: S.s. cut 1c, Milwaukee, to 16.6c, **Aug. 25;** s.s. cut 0.6c, to 16c, **Aug. 28;** s.s. cut 1.1c, to 14.9c, **Aug. 30;** T.w. cut 1.6c, to 14c, **Aug. 28.**

S. O. Louisiana—Essolene: S.s. up 2.5c, Little Rock, to 21c **Aug. 22.**

S.s. up 1c, thru Tennessee, **Aug. 24.**

Magnolia Petroleum — Mobilgas: T.w. and s.s. up 1.5c, Houston, to 16c and 18c, **Aug. 2.**

S. O. California — Standard and Flight: T.w. and s.s. cut 1c, thru northern California, Oregon and Washington, **Aug. 31.**

Standard and Flight: T.w. and s.s. up 0.5c, thru southern California and Arizona, **Aug. 31;** cut 0.5c, thru southern California and Arizona, **Sept. 1.**

Continental Oil — Conoco Bronze and Demand: T.w. and s.s. cut 1c, thru Colorado, due to state tax decrease to 4c, **Sept. 1.**

Conoco Bronze: T.w. and s.s. cut 1c, Salt Lake City, to 16c and 18c, **Aug. 31.**

Demand: T.w. and s.s. cut 1c, Salt Lake City, to 14c and 16c, **Aug. 31.**

Aviation Gasoline

Continental Oil—T.w. cut 1c, thru Colorado, due to state tax decrease to 4c, **Sept. 1.**

Cut 1c, Salt Lake City, to 19c t.w., **Aug. 31.**

Kerosine

Atlantic Refining—Cut 0.75c, Hartford, to 7.75c t.w., **Aug. 22.**

S. O. Kentucky—Cut 2c, Vicksburg, to 12c t.w., **Aug. 29.**

S.O. NEW JERSEY TERRITORY

	Posted Tank Car	Essolene Retail T.W.	Essolene Taxes	Posted S.S.	Kerosine T.W.
Atlantic City, N. J....	8.5	15	4	18.5	10
Newark, N. J.....	7.8	14.3	4	17.8	9.5
Annapolis, Md.....	8.1	14.6	5	19.1	10
Baltimore, Md.....	7.6	14.1	5	18.6	9.5
Cumberland, Md.....	9.1	15.6	5	20.1	12.7
Washington, D. C.....	7.8	14.3	3	12	11.5
Danville, Va.....	9.2	15.7	6	21.2	12.9
Norfolk, Va.....	7.7	14.2	6	19.7	11.3
Petersburg, Va.....	8	14.5	6	20	11.4
Richmond, Va.....	8	14.5	6	20	11.7
Roanoke, Va.....	9.3	15.8	6	21.3	12.9
Charleston, W. Va.....	8.5	15	5	19.5	12.6
Parkersburg, W. Va...	7.8	14.3	5	18.8	11.2
Wheeling, W. Va.....	8.5	15	5	19	12.2
Charlotte, N. C.....	9.9	16.4	7	22.9	13.5
Hickory, N. C.....10.2		16.7	7	23.2	13.7
Mt. Airy, N. C.....10.2		16.7	7	23.2	13.8
Raleigh, N. C.....	9.7	16.2	7	22.7	13.3
Salisbury, N. C.....10		16.5	7	17	13.6
Charleston, S. C.....	7.7	14.2	7	20.7	11.3
Columbia, S. C.....	9.5	16	7	22	13.2
Spartanburg, S. C.....	9.9	16.4	7	22.5	13.5

Price basis to dealers: Dealer contracts for Essolene are written at dealers' price, which to divided dealers is 2.5c per gal. above tank car price, and to undivided dealers, is dealer price less 0.5c per gal. Note: Beginning Dec. 28, 1933, voluntary discounts off posted tank car price given to dealers thru territory, where service station prices are subnormal.

Price basis to commercial consumers: Consumer t.w. price at time and place of delivery; consumer t.w. is generally 2c off s.s. price.

Kerosine Discount: 1c off t.w. price for 25 gals. or more, under contract thru territory (Baltimore City contract not necessary) except no discount in New Jersey.

S. O. NEW YORK

	Socony Gasoline Posted Dealer	Taxes	Total Posted T.W.	S.S.	Kerosine T.W.
Metropolitan New York City, including Staten Island.....	10	4	16.5	17.5	8.5
Albany, N. Y.....	9.5	4	16	17	9
Binghamton, N. Y....	11	4	17.5	18.5	9.25
Buffalo, N. Y.....	11	4	17.5	18.5	9
Jamestown, N. Y.....	11	4	17.5	18.5	9
Plattsburg, N. Y.....	11.5	4	18	19	9.75
Rochester, N. Y.....	10.5	4	17	18	9.25
Syracuse, N. Y.....	10.5	4	17	18	9.25
Danbury, Conn.....	10.5	3	16	17	8.5
Hartford, Conn.....	10.5	3	16	17	7.75
New Haven, Conn....	9.5	3	15	16	7.50
Bangor, Me.....	11.5	5	19	20	9.5
Portland, Me.....	10.7	5	18.2	19.2	8.75
Boston, Mass.....	8.5	4	15	16	8
Concord, N. H.....	11.5	5	19	20	9.25
Lancaster, N. H.....	12.2	5	19.7	20.7	9.75
Manchester, N. H.....	11	5	18.5	19.5	9
E. Providence, R. I...	7.5	3	13	14	8.5
Burlington, Vt.....	12.3	5	19.8	20.8	9.75
Rutland, Vt.....	11.5	5	19	20	9.75

Discounts to commercial consumers, 2c under s.s. price at time and place of delivery in accordance with CD-1 Official Commercial Consumer Contract

Third Grade Gasoline

Offered only at points where competition requires at s.s., 2c below s.s. prices of Socony. Dealers get 2c margin.

ATLANTIC REFINING

Atlantic White Flash Plus Gasoline

	Total T.W.	Taxes	T.W.	S.S.	Kerosine T.W.
Philadelphia, Pa.....	11.5	4	15.5	17.5	10
Pittsburgh, Pa.....	12	4	16	18	10
Allentown, Pa.....	11.5	4	15.5	17.5	10
Erie, Pa.....	12	4	16	18	9
Scranton, Pa.....	12	4	16	18	10
Altoona, Pa.....	12	4	16	18	10
Dover, Del.....	12	4	16	18	10
Wilmington, Del.....	8	4	12	14	9
Boston, Mass.....	10	4	14	16	8
Springfield, Mass.....	11.5	4	15.5	17.5	8.75
Worcester, Mass.....	11.5	4	15.5	17.5	8.75
Fall River, Mass.....	10.5	4	14.5	16.5	8.5
Providence, R. I.....	9	3	12	14	8.5
Hartford, Conn.....	12	3	15	17	7.75
New Haven, Conn.....	11	3	14	16	7.5
Atlantic City, N. J....	12.5	4	16.5	18.5	10
Camden, N. J.....	12	4	16	18	10
Trenton, N. J.....	12.1	4	16.1	18.1	10
Annapolis, Md.....	12.1	5	17.1	19.1	9.5
Baltimore, Md.....	11.6	5	16.6	18.6	9.5
Hagerstown, Md.....	11	5	16	18	10
Richmond, Va.....	12	6	18	20	11.7
Wilmington, N. C.....	11.8	7	18.8	20.8	11.4
Brunswick, Ga.....	13	7	20	22	*13.5
Jacksonville, Fla.....	10	8	18	20	11.5

Note: Tank wagon prices are those applicable to consumers purchasing lots of 100 gals. or over in one delivery and in accordance with CD-1 Official Commercial Consumer Contract.

Dealer discounts: on Atlantic White Flash Plus gasoline, thru territory, divided dealers, price equal to 3.5c off posted s.s. price; undivided dealers, price equal to 4c off posted s.s. price; authorized dealers contracts previous to Aug. 19, 1933, price equal to 3c less than posted s.s. price, plus 1c rental.

*Georgia kerosine has 1c state tax, not included in above prices.

Above prices include these inspection fees on both gasoline and kerosine, per gallon, figured on basis of 50 gallons per barrel:

Alabama, 1/40c on gasoline, 1/2c on kerosine; Arkansas, 1/5c per gal. in a single barrel, 1/20c per gal. in bulk; Florida, 1/8c; Illinois, 3/100c; Indiana, 1/2c per gal. in a single barrel: 3/10c per gal. in lots of 2 to 10 bbls., 1/5c for 10 to 50 bbls., 2/25c for over 50 bbls.; Kansas, 1/50c, (3/50c can be charged to meet inspection department expenses); Louisiana, 1/32c; Minnesota, 1/25c; Missouri, 3/100c; Nebraska, 3/100c; Nevada, gasoline, 1/20c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 2/25c per gal. in lots of more than 50 bbls., 1/5c in lots less than 50 bbls.; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c; and Wisconsin, 1/25c.

Kerosine inspection fees only: Iowa, 2/25c; Michigan, 4/5c per gal. for first 2 bbls.; 3/5c for next 3; 2/5c for next 5; 3/10c for next 15, and 1/5c per gal. in lots over 25 bbls.

(Continued on next page)

Tank Wagon, Service Station Markets for Gasoline and Kerosine

Tax column includes 1c federal tax, state gasoline tax; also city and county taxes as indicated in footnotes

These Prices in Effect September 3, 1934, as Posted by Principal Marketing Companies

S. O. OHIO

Sohio X-70 Gasoline

	Total T.W.	Taxes	T.W.	S.S.	Kerosine T.W.
Ohio statewide	10.5	5	15.5	17.5	*12.5
Summit county	9.5	5	14.5	17.5	*12.5
Allen, Butler, Champaign, Clark, Darke, Miami, Montgomery and Preble counties:	9.5	5	14.5	15.5	*12.5
Hamilton county	8.5	5	13.5	15.5	*12.5

Renown (Third Grade)

Ohio statewide	10	5	15	16	*12.5
Summit county	9.5	5	14.5	16	*12.5
Allen, Butler, Champaign, Clark, Darke, Miami, Montgomery and Preble counties:	9.5	5	14.5	15.5	*12.5
Hamilton county	8.5	5	13.5	15.5	*12.5

Resellers' Tank Wagon Prices (Allen, Butler, Champaign, Clark, Darke, Hamilton, Miami, Montgomery and Preble counties)

	Undivided Accounts (Exc. of Authorized Agents)	Divided Accounts	Authorized Agents (Exc. of ½c Rental)
Sohio X-70	12.5	13	13
Renown (3rd grade)	12.5	13	13

*Kerosine prices include 1c state tax.

Note: On single deliveries of motor gasoline under 15 gallons, t.w. consumers, s.s. price applies.

Discounts to contract consumers only: off t.w. price, on deliveries per month: 0 to 3,000 gals., Sohio Ethyl, X-70 and Renown, full t.w. price, 3,000 to 10,000 gals., Ethyl and X-70, 1c; over 10,000 gals., 2c. Renown, 3,000 to 10,000 gals., 0.5c; over 10,000 gals., 1c.

Governmental business (U. S., state, county, municipal and departments thereof) for tank wagon deliveries: effective March 29, 1934, get seller's t.w. price, at time and place of delivery, as posted at seller's plant from or at which delivery is made, subject to a maximum price limitation during the first three months of this contract of 25% more than the posted price. (Price to U. S. Gov.'t is less 4c per gal state tax, and to state depts., less 1c federal tax). Discounts same as those contained in Official Contract Form CD-1. For service station deliveries: same price basis as for t.w. deliveries, except that prices are posted s.s. prices.

Discounts on kerosine: to dealers and commercial consumers, 2.5c per gal. off t.w. price, any quantity.

S. O. KENTUCKY

Crown Gasoline

Lexington, Ky.	12.5	6	18.5	20.5	11.5
Louisville, Ky.	12	6	18	20	11
Paducah, Ky.	8	6	14	16	11
Covington, Ky.	10	6	16	17	11.5
Jackson, Miss.	11.5	7	18.5	20.5	*13
Vicksburg, Miss.	11	7	18	20	*12
Birmingham, Ala.	10	*8	18	20	11
Mobile, Ala.	12.5	*8	20.5	22.5	12
Montgomery, Ala.	12.5	*9	21.5	23.5	*15
Macon, Ga.	13	7	20	22	*14.5
Atlanta, Ga.	12	7	19	22	*14.5
Augusta, Ga.	13	7	20	22	*14.5
Savannah, Ga.	12	7	19	21	*14
Jacksonville, Fla.	10	8	18	20	11.5
Miami, Fla.	10	8	18	20	13.5
Tampa, Fla.	10	8	18	20	12.5
Pensacola, Fla.	8	*9	17	19	13.5

Kyso (Third Grade)

Lexington, Ky.	11	6	17	19	11.5
Louisville, Ky.	10.5	6	16.5	18.5	11
Paducah, Ky.	5	6	11	13	11
Covington, Ky.	8.5	6	14.5	15.5	11.5
Jackson, Miss.	10	7	17	19	*13
Vicksburg, Miss.	9.5	7	16.5	18.5	*12
Birmingham, Ala.	10	*8	18	20	11
Mobile, Ala.	11	*8	19	21	12
Montgomery, Ala.	10.5	*9	19.5	21.5	*15
Atlanta, Ga.	10	7	17	20	*14.5
Augusta, Ga.	11	7	18	20	*14.5
Macon, Ga.	11	7	18	20	*14.5
Pensacola, Fla.	7	*9	16	18	*13.5

Dealer Discount: off posted s.s. price, on Crown and Crown Ethyl gasolines to "undivided" dealers 4c; on Kyso, 3c; to "divided" dealers, Crown and Ethyl, 3.5c, and Kyso, 2.5c, all effective on or about Jan. 1, 1934.

***Taxes.** in the tax column is included these city and county gasoline taxes at the following points: Birmingham, 1c city; Mobile, 1c city; Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia and Mississippi kerosine prices include 1c state tax. Montgomery kerosine price includes ½c city tax.

S. O. INDIANA

Standard Red Crown Gasoline

	Total T.W.	Taxes	T.W.	S.S.	Kerosine T.W.
Chicago, Ill.	11.3	*4	15.3	17.3	8
Decatur, Ill.	12.7	*4	16.7	18	10.2
E. St. Louis, Ill.	12	*4	16	18	9.5
Joliet, Ill.	12.7	*4	16.7	16.7	10.2
Peoria, Ill.	10.7	*4	14.7	13.9	10.2
Quincy, Ill.	12.6	*4	16.6	18.6	10
Springfield, Ill.	12.7	*4	16.7	18.7	10.2
Indianapolis, Ind.	12.9	*5	17.9	19.9	‡14.2
Evansville, Ind.	12.7	*5	17.7	19.7	‡14.0
South Bend, Ind.	13.2	*5	18.2	20.2	‡14.5
Detroit, Michigan	12	4	16	18	10.5
Grand Rapids, Mich.	12.7	4	16.7	17.7	10.2
Saginaw, Mich.	13	4	17	18	10.5
Marquette, Mich.	13.2	4	17.2	19.2	10.8
Green Bay, Wisc.	12.7	5	17.7	19.7	10.2
Madison, Wisc.	12 4	5	17 4	19.4	9 9
Milwaukee, Wisc.	10.5	5	15.5	16.2	9.7
La Crosse, Wisc.	15 3	5	18.3	20.3	10.8
Minneapolis, Minn.	10.9	4	14.9	16.9	10.4
Duluth, Minn.	13.2	4	17.2	19.2	10.4
Mankato, Minn.	12.8	4	16.8	16.8	10.3
Des Moines, Ia.	12.6	4	16.6	18.6	8
Sioux City, Ia.	12.2	4	16.2	18.2	9.7
Davenport, Ia.	12.6	4	16.6	18.6	10.1
Mason City, Ia.	12.6	4	16.6	18.6	10.1
St. Louis, Mo.	11.5	†3.5	15	17	8.7
Kansas City, Mo.	11	†4	15	15	7.5
St. Joseph, Mo.	11.3	†4	15.3	15.5	8.8
Fargo, N. D.	13.9	4	17 9	19.9	12.1
Grand Forks, N. D.	14.3	4	18.3	20.3	12.4
Minot, N. D.	14.6	4	18.6	20.6	12.1
Pierre, S. D.	13.6	*5	18.6	20.6	11.1
Huron, S. D.	13.8	*5	18.8	20.8	11.4
Wichita, Kansas	10.6	4	14.6	16.6	6
Bartlesville, Okla.	11	5	16	18.5	8.5

Note: Kerosine s.s. prices are generally 3c above normal t.w. price.

Stanolind Gasoline (Third Grade)

Stanolind prices are 1.5c under normal Red Crown prices, thru territory. Among exceptions are the following points:

Chicago, Ill.	9.8	*4	13.8	15.8	8
Decatur, Ill.	11.2	*4	15.2	16.5	10.2
E. St. Louis, Ill.	10.5	*4	14.5	16.5	9.5
Joliet, Ill.	11.2	*4	15.2	15.2	10.2
Peoria, Ill.	10	*4	14	14	10.2
Milwaukee, Wisc.	9	5	14	14.9	9.7
Duluth, Minn.	11.7	4	15.7	11.9	10.4
Minneapolis, Minn.	9.4	4	13.4	15.4	10.4
Mankato, Minn.	9	*4	13	14.9	10.3
Evansville, Ind.	11.2	*5	16.2	18.2	‡14
Des Moines, Ia.	11.1	4	15.1	17.1	8
Davenport, Ia.	11.1	4	15.1	16.6	10.1
Kansas City, Mo.	9	†4	13	13	7.5
St. Joseph, Mo.	9.8	†4	13.8	14.9	8.8
Wichita, Kan.	6	4	10	12	6
Fargo, N. D.	12.4	4	16.4	16.7	12.1
Grand Forks, N. D.	9	4	13	15	12.4
Huron, S. D.	12.3	*5	17.3	17	11.4
Pierre, S. D.	12.1	5	17.1	16.5	11.1
Bartlesville, Okla.	9	5	14	15.5	8.5

†St. Louis tax includes 0.5c city tax; Kansas City and St. Joseph, 1c city tax. ‡Includes 4c state tax.

*Illinois collects a sales tax of 2%, to cover which Standard charges 0.2c per gallon on gasoline, kerosine and naphtha: this tax is included in t.w. and s.s. columns in above table for gasoline, but not in tax column. South Dakota gasoline and kerosine prices include 0.1c for sales tax. Indiana t.w. and s.s. gasoline prices include 0.2c for chain store tax.

Discounts: to controlled and uncontrolled dealers, undivided gasoline accounts, thru territory, off s.s. price: Ethyl and Red Crown gasoline, 4c; Stanolind, 3c. Divided gasoline accounts get 0.5c less per gallon. In case of lease and agency and AAA accounts, the above discounts include the 0.5c per gal. rental allowance.

Discounts to commercial consumers: effective Feb. 26, 1934, thru territory, including Chicago, on purchases per month, discount off t.w. price: Ethyl and Red Crown, 3000 to 10,000 gals., 1c; Stanolind, 0.5c; over 10,000 gals., Ethyl and Red Crown, 2c; Stanolind, 1c. Purchases under 3,000 gals. monthly made at regular t.w. price; if single deliveries of less than 25 gals. are made, regular s.s. price applies.

S. O. NEBRASKA

Standard Red Crown Gasoline

Omaha, Neb.	12	5	17	18	10
McCook, Neb.	12.7	5	17.7	18.7	10.7
Norfolk, Neb.	12.4	5	17.4	19.4	10.4
North Platte, Neb.	12.8	5	17.8	18.3	10.8
Scottsbluff, Neb.	13.3	5	18.3	18.3	9

Reliance Gasoline (Third Grade)

Reliance gasoline prices are 1.5c below normal Red Crown prices. Following points are among those below this normal differential:

(Continued on next page)

S. O. NEBRASKA (Cont'd)

Reliance Gasoline (Third Grade)

	Total T.W.	Taxes	T.W.	S.S.	Kerosine T.W.
Omaha, Neb.	10.5	5	15.5	15.9	10
McCook, Neb.	11.2	5	16.2	17.7	10.7
Norfolk, Neb.	10.9	5	15.9	17.9	10.4
North Platte, Neb.	11.3	5	16.3	17	10.8
Scottsbluff, Neb.	12	5	17	17.3	9

Discounts to dealers: including rentals under lease and agency agreements, off s.s. price: to undivided accounts, Standard Red Crown and Ethyl gasolines, 4c; Reliance, 3c; to divided accounts, Red Crown and Ethyl, 3.5c; Reliance, 2.5c.

Discounts to consumers covered only by form CD-1 Official Commercial Consumer Contract.

S. O. LOUISIANA

	Posted Tank Car	Essolene Posted Retail T.W.	Tax as	Posted S.S.	Kerosine T.W.
Little Rock, Ark.	7.6	14.1	7.5	21	11
Alexandria, La.	7.6	14.1	*7	20.5	*10
Baton Rouge La.	7.7	14.2	6	19 7	*12
New Orleans, La.	7.3	13.8	*7	20	*10
Lake Charles, La.	7.7	14.2	*7	20.7	*12
Shreveport, La.	6.5	13	6	18.5	*10
Lafayette, La.	7.8	14.3	*7	20 8	*12
Bristol, Tenn.	10	16.5	8	22.6	14
Chattanooga, Tenn.	10	16.5	8	22.5	11
Knoxville, Tenn.	10.2	16.7	8	22.5	13.5
Memphis, Tenn.	8.6	15.1	8	22.5	10.5
Nashville, Tenn.	9.5	16	8	22.5	12

*Lake Charles, Alexandria, New Orleans and Lafayette gasoline tax includes 5c state tax, 1c federal tax, and 1c parish tax. Louisiana kerosine prices include 1c state tax.

Price basis to dealers: Divided dealers get dealer price which is 2.5c above tank car; undivided dealers get dealer price, less 0.5c.

Price basis to commercial consumers: Consumer t.w. price at time and place of delivery; consumer t.w. is generally 2c off s.s. price.

Kerosine discount: 2c per gal. off t.w. price to open dealers.

MAGNOLIA PETROLEUM

	Mobilgas Total T.W.	Taxes	T.W.	S.S.	Kerosine T.W.
Muskogee, Okla.	11	5	16	18	7.5
Oklahoma City.	10	5	15	17	8.5
Tulsa, Okla.	11	5	16	18	8.5
Fort Smith, Ark.	11.5	5	16.5	18.5	8
Little Rock, Ark.	11.5	7.5	19	21	9
Texarkana, Ark.	12	*5	17	19	8
Dallas, Tex.	9	5	14	16	8
Fort Worth, Tex.	9	5	14	16	8
Houston, Tex.	11	5	16	18	8.5
San Antonio, Tex.	11	5	16	18	8.5
El Paso, Tex.	13	5	18	20	11

Metro Gasoline (Third Grade)

Muskogee, Okla.	8	5	13	15	7.5
Oklahoma City.	8	5	13	15	8.5
Tulsa, Okla.	8	5	13	15	8.5
Fort Smith, Ark.	10	5	15	17	8
Little Rock, Ark.	10	7.5	17.5	19.5	9
Texarkana, Ark.	6	5	11	13	8
Dallas, Tex.	5	5	10	12	8
Ft. Worth, Texas	5	5	10	12	8
Houston, Tex.	9	5	14	16	8.5
San Antonio, Tex.	9	5	14	16	8.5
El Paso, Tex.	10	5	15	17	11

Dealer discounts: On Metro gasoline, 1c per gal. off t.w. price thru territory.

*In Texarkana, 4c Texas tax applies; outside Texarkana, 6.5c Arkansas tax applies.

†In Fort Smith, 4c Oklahoma tax applies outside Fort Smith, 6.5c Arkansas tax applies.

CONTINENTAL OIL

Conoco Bronze Gasoline

Denver, Colo.	13	5	18	20	10
Pueblo, Col.	13	5	18	20	11
Grand Junc., Colo.	15.5	5	20.5	22.5	15
Casper, Wyo.	13	5	18	20	11.5
Cheyenne, Wyo.	13	5	18	20	13
Butte, Mont.	15	6	21	23	17.5
Helena, Mont.	17	6	23	25	17.5
Salt Lake City, Utah	11	5	16	18	16
Boise, Ida.	16.5	6	22.5	24.5	18
Twin Falls, Ida.	16.5	6	22.5	24.5	18
Albuquerque, N. M.	11.5	†6.5	18	20	13

Tank Wagon, Service Station Markets for Gasoline and Kerosine

Tax column includes 1c federal tax, state gasoline tax; also city and county taxes as indicated in footnotes

These Prices in Effect September 3, 1934, as Posted by Principal Marketing Companies

CONTINENTAL OIL (Cont'd)

Demand (Third Grade)

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Denver, Colo.	11	5	16	18	10
Cheyenne, Wyo.	11.5	5	16.5	18.5	13
Helena, Mont.	15	6	21	23	17.5
Salt Lake City, Utah	9	5	14	16	16
Boise, Ida.	14.5	6	20.5	22.5	18
Albuquerque, N. M.	9.5	†6.5	16	18	13

†Includes city tax of 0.5c

Discounts: effective March 1, 1934, on gasolines, thru territory, off s.s. price: to "undivided" dealers: Ethyl and Conoco Bronze, 4c; Demand, 3c; to "divided" dealers: Ethyl and Conoco Bronze, 3.5c; Demand, 2.5c.

S. O. CALIFORNIA

Standard Gasoline

San Francisco, Cal.	12.5	4	16.5	18.5	12.5
Los Angeles, Cal.	11.5	4	15.5	17.5	12.5
Fresno, Cal.	13	4	17	19	14
Phoenix, Ariz.	14	6	20	22	†16
Reno, Nev.	15	5	20	22	15.5
Portland, Ore.	13	6	19	21	13.5
Seattle, Wash.	13	6	19	21	13.5
Spokane, Wash.	16	6	22	24	18
Tacoma, Wash.	13	6	19	21	13.5

Flight Gasoline (Third Grade)

San Francisco, Cal.	10.5	4	14.5	16.5	12.5
Los Angeles, Cal.	9.5	4	13.5	15.5	12.5
Fresno, Cal.	11	4	15	17	14
Reno, Nev.	13	5	18	20	15.5
Phoenix, Ariz.	12	6	18	20	†16
Portland, Ore.	10.5	6	16.5	18.5	13.5
Seattle, Wash.	10.5	6	16.5	18.5	13.5
Tacoma, Wash.	10.5	6	16.5	18.5	13.5
Spokane, Wash.	13.5	6	19.5	21.5	18

†Includes 5c state tax.

Discounts: to 100% dealers: on Standard gasoline, beginning June 20, 1934, 2c per gal. off t.w. price; on Flight gasoline, 1c off t.w.

CANADA

Prices of Imperial Oil Ltd.

Per Imperial Gallon, which is 1.2 U. S. Gallons

Imperial Three Star Gasoline

Hamilton, Ont.	*15	6	*21	23.5	17.5
Toronto, Ont.	*15	6	*21	23.5	17.5
Brandon, Man.	23.3	7	30.3	33.3	21.8
Winnipeg, Man.	21.7	7	28.7	31.7	20.2
Regina, Sask.	23	6	29	32	21.5
Saskatoon, Sask.	25.8	6	31.8	34.8	24.3
Edmonton Alta.	25.2	6	31.2	34.2	23.7
Calgary, Alt.	22.5	6	28.5	31.5	21
Vancouver, B. C.	21	7	*28	31	24
Montreal, Que.	18	6	24	27	17
St. John, N. B.	18	8	26	30	21
Halifax, N. S.	18	8	26	30	21

*No established t.w. price at these points: dealers and consumers' prices based on "so many cents below s.s. prices"; open dealers get 2.5c off.; 100% dealers get 1c additional.

Discount to dealers and A.R.D. Accounts:

On gasoline, effective May 14, 1934: in Maritime Provinces, all dealers get 4c off s.s. price; in all other provinces, open dealers get 3c off s.s. price and 1c additional to 100% accounts.

Aviation Gasoline Prices

Following are tank car and/or tank wagon prices of aviation gasoline in principal marketing territories (Stanavo aviation in all territories except Continental Oil and Magnolia Pet. Co.) Tax column includes 1c federal tax, and state tax; also municipal taxes as indicated in footnotes.

S. O. NEW JERSEY

Prices in Effect Sept. 3, 1934

(Excluding Taxes)	Tank Car
Bayonne, N. J.	10.5
Baltimore, Md.	10.5
Basis of F.o.b. Jacksonville, Fla.	10.5

COLONIAL BEACON OIL CO.

	Tank Car
Bayonne, N. J. (exclusive of taxes)	10.5

S. O. PENNSYLVANIA

	T.W.	Tax	Total T.W.
Philadelphia, Pa.	15.5	4	19.5
Pittsburgh, Pa.	16	4	20
Altoona, Pa.	16	4	20
Harrisburg, Pa.	15.5	4	19.5

S. O. OHIO

Thru Ohio: (To Commercial Consumers)

Stanavo Ethyl Aviation, (73 Octane, Blue):	15.5	5	20.5

Discounts: to commercial consumers on contract only: 60 octane and above, from 3,000 to 10,000 gals. per month, 1c; over 10,000 gals. per month, 2c.

For delivery on contract to hangar operators reselling: 2c below commercial consumer posted t.w. price.

S. O. INDIANA

Chicago, Ill.	†15.3	4	19.3
Indianapolis, Ind.	15.7	5	20.7
Detroit, Mich.	16	4	20
Milwaukee, Wisc.	15.2	5	20.2
Minneapolis, Minn.	15.9	4	19.9
St. Louis, Mo.	14.2	3	17.2
Kansas City, Mo.	14.7	*4	18.7
Fargo, N. D.	16.9	4	20.9
Huron, S. D.	**16.9	5	21.9
Wichita, Kans.	13.6	4	17.6

*Includes 1c city tax.

**Includes 0.1c to cover sales tax.

†Includes 0.2c cent to cover Ill. 2% sales tax.

S. O. LOUISIANA

(Excluding Taxes)	Tank Car
Basis of F.o.b. Tulsa, Okla.	8.5

MAGNOLIA PETROLEUM

	T.W.	Tax	Total T.W.
Dallas, Tex.	15	5	20

HUMBLE OIL & REFINING CO.

	Tank Car
Baytown, Tex. (exclusive of taxes)	8.7

CONTINENTAL OIL CO.

	T.W.	Tax	Total T.W.
Denver, Colo.	16	5	21
Cheyenne, Wyo.	16	5	21
Helena, Mont.	20	6	26
Salt Lake City, Utah	14	5	19
Albuquerque, N. M.	16	*6.5	22.5

*Includes city tax of 0.5c.

S. O. CALIFORNIA

Phoenix, Ariz.	14.3	6	20.3
Los Angeles, Cal.	12.3	4	16.3
San Francisco, Cal.	12.2	4	16.2
Reno, Nev.	13.5	5	18.5
Portland, Ore.	14.7	6	20.7
Seattle, Wash.	15.4	6	21.4
Spokane, Wash.	17	6	23

Note: Above prices are for deliveries by tank truck or in iron barrels in quantities of 100 gallons or more. For quantities less than 100 gallons, add 2c per gallon.

Naphtha Prices

Prices in Effect Sept. 3, 1934

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	†13.9	†15.9	15
Detroit	**17.4	**21	**18
Kansas City	14	15.5	16
Milwaukee	19.5	*21	21
Minneapolis	**19.8	**21.3	**22
St Louis	14.7	16.2	17
New York		13	13
Boston		17	16
Philadelphia		15	16

*Includes 4c state tax.

**Includes 3c state tax. †Includes 0.2c cent to cover Illinois 2% sales tax.

Petroleum Spirits (Solvent)

Tank Cars (F.o.b. refinery or seaboard terminal)	
New York Harbor	9.5
Philadelphia district	9.5
Providence	9.5

Tank Wagon or Steel Barrels

New York City	13
Syracuse	16
Rochester (net price)	16
Buffalo (net price)	14
Providence	14
Boston	17
Bridgeport	13.9
Newark	13
Philadelphia	13.9
Lancaster	17
Altoona	17
Baltimore	*14.9

Note: 2c off above t.w. prices to large buyers in some instances. *2c discount allowed if under contract, and 3c discount allowed on 200 gal. or more, with 1c premium for steel barrels.

Heating Oil

Following are tank wagon prices of various grades of heating oil at the points shown in various territories. Prices are in cents per gallon.

Prices in Effect Sept. 3, 1934

	No. 1	No. 2	No. 3	No. 4
S. O. New Jersey				
Newark, N. J.	8.5	7	---	7
Atlantic City, N. J.	8.5	7	---	7
Baltimore, Md.	8.5	7	---	7
Washington, D. C.	8.75	7.25	---	7.25
S. O. New York				
New York City	8.5	7	7	6.5
Albany, N. Y.	8.75	7.25	7.25	6.75
Rochester, N. Y.	9.25	7.75	7	....
Boston, Mass.	8.5	7	7	7
Augusta, Me.	9.25	7	7	7
Manchester, N. H.	8.75	7.25	7.25	7.25
Burlington, Vt.	9.75	8.25	8.25	8.25
New Haven, Conn.	8.5	7	7	6.5
Providence, R. I.	8.5	7	7	6.5

	No. 1	No. 2	No. 3	No. 4
Atlantic Refining				
Philadelphia, Pa.	8.5	7	....	6.5
Allentown, Pa.	9	7.5	7.5	7.5
Wilmington, Del.	8.5	7	---	6.5
Springfield, Mass.	8.75	7.25	---	7.25
Worcester, Mass.	8.75	7.25	---	7.25
Hartford, Conn.	8.5	7	---	7
S. O. Ohio				
Ohio Statewide	8	7.75	7.50	7.25

Note: S. O. Ohio prices are for hose dumps; bucket dumps are 0.5c per gallon higher.

S. O. Indiana

Stanolex Fuel Oil No. 1

Chicago	8.25
Indianapolis, Ind.	*12.7
Detroit, Mich.	9
Madison, Wis.	8.4
Minneapolis, Minn.	8.9
Sioux City, Ia.	8.2
St. Louis, Mo.	7.8
Kansas City, Mo.	7.7

*Includes state tax of 4c.

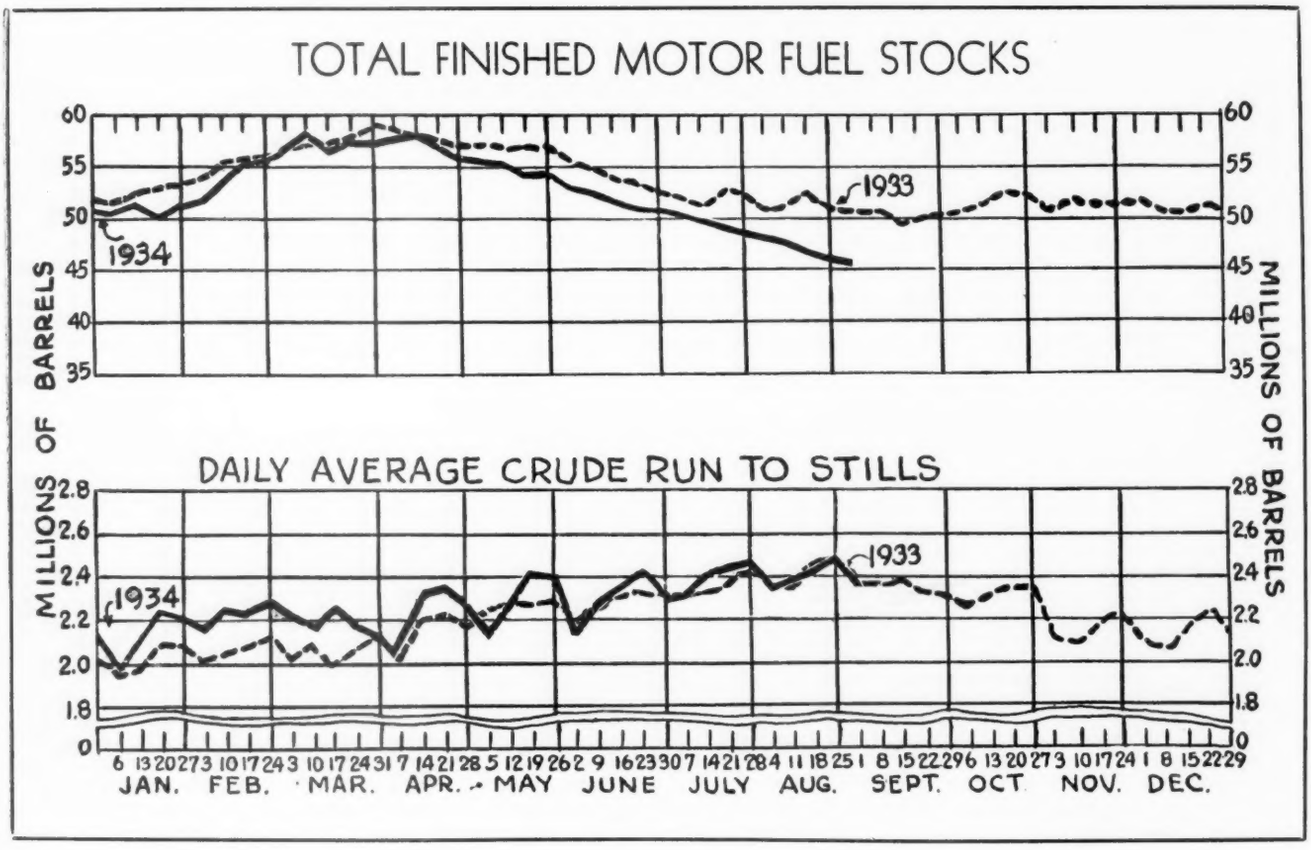
Discounts: at Chicago, Indianapolis and Detroit 1c off t.w. price for deliveries of 100 gals. and over; at St. Louis, 1c off for 50 gal. dumps and over; at other above points, 1c off t.w. price for deliveries 150 gals. and over.

Fuel Prices Revised

CHICAGO, Sept. 4.—Revisions in tank wagon prices of several grades of fuel oil have been made by leading Chicago distributors the past few days.

Sept. 1, Standard Oil Company of Indiana reduced the tank wagon price of No. 3 fuel oil 0.5 cent, to 6 cents and advanced No. 4 0.5 cent to 5.5 cents. On Sept. 3, Deep Rock Oil Corp. made similar changes in price of numbers 3 and 4 oils and in addition reduced tank wagon price of No. 2 oil, 0.25 cent, to 6.5 cents. (Prices for small dumps are 1 cent a gallon higher.)

U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.


TOTAL FINISHED MOTOR FUEL STOCKS
MILLIONS OF BARRELS
MILLIONS OF BARRELS
60
55
50
45
40
35
1933
1934
DAILY AVERAGE CRUDE RUN TO STILLS
MILLIONS OF BARRELS
MILLIONS OF BARRELS
2.8
2.6
2.4
2.2
2.0
1.8
0
1933
1934
6 13 20 27 3 10 17 24 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9 16 23 30 7 14 21 28 4 11 18 25 1 8 15 22 29 6 13 20 27 3 10 17 24 1 8 15 22 29
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Refinery Crude Runs Cut 113,000 Barrels Daily

By Telegraph

NEW YORK, Sept. 5

A DECREASE of 507,000 barrels in bulk stocks of motor fuel brought these stocks to 55,857,000 barrels the week ended Sept. 1, according to reports gathered by the American Petroleum Institute at plants covering 89.7 per cent of the country's still capacity. This is a drop of 3,429,000 barrels from a month ago.

Finished motor fuel stocks decreased 383,000 barrels, to 45,737,000 barrels, with all districts, excepting three, showing declines. These declines ranged from 37,000 barrels in North Louisiana-Arkansas to 269,000 barrels in the East Coast. Gains were 49,000 barrels in Louisiana Gulf; 197,000 barrels in the Texas Gulf and 121,000 barrels in California.

Refinery stocks of motor fuel gained 54,000 barrels, to 28,603,000 barrels. In-transit and terminal stocks declined 437,000 barrels, to 17,134,000 barrels and stocks of unfinished gasoline declined 174,000 barrels to 5,870,000 barrels. Stocks of other motor fuels gained 50,000 barrels, to 4,250,000 barrels.

Crude runs to stills were reduced 113,000 barrels daily, to 2,361,000 barrels daily average the week ended Sept. 1. California refiners cut their runs 44,000 barrels, to 393,000 barrels daily. Other refining groups cutting their runs appreciably were: Texas Gulf, 35,000 barrels; Inland Texas, 21,000 barrels; and Appalachian, 13,000 barrels.

Current Refinery Operations

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills (Barrels) Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Stocks (Thousands of Barrels) Total Finished Motor Fuel*		Total Finished Motor Fuel*		Gas & Fuel Oil		Gas & Fuel Oil	Cracked % Total Capacity Reporting	Gasoline Production Daily Av. Production (Barrels) Week Ended	
		Sept. 1	Aug. 25	Sept. 1	Aug. 25	Sept. 1	Aug. 25	Sept. 1	Aug. 25	Sept. 1	Aug. 25			Sept. 1	Aug. 25
East Coast	100.0	498,000	500,000	85.6	85.9	13,848	14,117	13,092	12,832			95.0	82,000	78,000	
Appalachian	93.3	96,000	109,000	68.6	77.9	1,555	1,613	1,425	1,358			100.0	27,000	25,000	
Ind., Ill., Ky.	94.6	354,000	346,000	83.9	82.0	7,018	7,155	4,752	4,605			95.1	115,000	94,000	
Okla., Kans., Mo.	83.7	244,000	240,000	63.2	62.2	4,484	4,530	3,756	3,715			93.0	65,000	58,000	
Inland Texas	47.6	77,000	98,000	46.1	58.7	1,036	1,184	1,533	1,609			80.5	26,000	26,000	
Texas Gulf	97.5	491,000	526,000	88.9	95.3	3,601	3,404	10,034	9,405			99.2	109,000	103,000	
La. Gulf	96.4	122,000	120,000	75.3	74.1	1,270	1,221	2,514	2,456			100.0	16,000	19,000	
No. La., Ark.	83.7	51,000	53,000	66.2	68.8	239	276	593	618			92.7	9,000	11,000	
Rocky Mt.	66.7	35,000	45,000	54.7	70.3	663	718	595	613			91.3	8,000	10,000	
California	96.9	393,000	437,000	47.8	53.2	12,023	11,902	76,391	76,063			100.0	53,000	51,000	
TOTAL	89.7	2,361,000	2,474,000	70.0	73.3	45,737	46,120	114,685	114,274			95.6	510,000	475,000	

*Includes stocks at refineries, in bulk terminals, pipe lines and in transit.

Complete Seaboard Markets

Prices on this page do not include federal tax levied on some products

Eastern Domestic Markets

(Prices for tank car lots (unless otherwise noted), f.o.b. refinery or Seaboard terminal, representing majority of sales and quotations to jobbers and/or consumers. Florida and S. Carolina inspection tax not included.)

	Prices—Sept. 4	Aug. 27	Aug. 20
U. S. MOTOR GASOLINE: 59 Octane and Below:			
New York harbor	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
New York Harbor, barges	5.50 – 5.75	5.75 – 6.00	5.75 – 6.00
Philadelphia district	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
Philadelphia dist., barges	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
Baltimore district	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
Norfolk district	6.25	6.25	6.25
Wilmington, N.C., district	6.25	6.25	6.25
Charleston, S. C., district	6.25	6.25	6.25
Savannah district	6.50	6.50	6.50
Jacksonville district	6.50	6.50	6.50
Portland district	6.50	6.50	6.50
Boston district	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Providence district	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
MOTOR GASOLINE: 60-64 Octane Number			
New York harbor	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
New York harbor, barges	5.75 – 6.00	6.00 – 6.25	6.00 – 6.25
Philadelphia district	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Philadelphia dist., barges	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Baltimore district	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Norfolk district	6.50	6.50	6.50
Wilmington, N. C., district	6.50	6.50	6.50
Charleston district	6.50	6.50	6.50
Savannah district	6.75	6.75	6.75
Jacksonville district	6.75	6.75	6.75
Portland district	6.75	6.75	6.75
Boston district	6.25 – 6.70	6.25 – 6.70	6.25 – 6.70
Providence district	6.15 – 6.65	6.15 – 6.65	6.25 – 6.65
MOTOR GASOLINE: 65 Octane Number and Above			
New York harbor	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
New York harbor, barges	6.00 – 6.25	6.25 – 6.50	6.25 – 6.50
Philadelphia district	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75
Philadelphia dist., barges	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75
Baltimore district	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
Norfolk district	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
Wilmington, N. C., district	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
Charleston district	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
Savannah district	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25
Jacksonville district	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25
Portland district	7.00	7.00	7.00
Boston district	6.50 – 6.75	6.50 – 6.75	6.50 – 6.75
Providence district	6.50 – 6.75	6.50 – 6.75	6.50 – 6.75

WATER WHITE KEROSINE—Prices—Sept. 4

New York harbor	5.25	Wilmington, N. C.	5.50
New York harbor, barges	5.00	Charleston district	5.50
Philadelphia district	5.25 – 5.50	Savannah district	5.50
Philadelphia district, barges	5.25 – 5.50	Jacksonville district	5.50
Baltimore district	5.25 – 5.50	Portland district	5.50
Norfolk district	5.50	Boston district	5.25
		Providence district	5.25

HEATING OILS: Prices—Sept. 4	**New York harbor**	**New York harbor, barges**	**Philadelphia district**
No. 1	5.25 – 5.50	5.00 – 5.50	5.25 – 5.50
No. 2	4.75 – 5.00	4.75 – 5.00	5.00
No. 3	5.00	4.75 – 5.00	5.00
No. 4	5.00	4.75 – 5.00	5.00
No. 5 (per barrel)	$1.50	.....	$1.50
No. 6 (per barrel)	$1.30	.....	$1.30

	Baltimore district	**Boston district**	**Providence district**
No. 1	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50
No. 2	5.00	5.00	5.00
No. 3	5.00	5.00	.....
No. 4	5.00	5.00	.....
No. 5 (per barrel)	$1.50	$1.60	.....
No. 6 (per barrel)	$1.30	$1.30	.....

Providence dist., barges:	**Sept. 4**	**Aug. 27**	**Aug. 20**
No. 1	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50
No. 2	4.75	4.75	4.75
No. 3	.....	.....	.....
No. 4	.....	.....	.....
No. 5 (per barrel)	.....	.....	.....
No. 6 (per barrel)	.....	.....	.....

Prices—Sept. 4	**Bunker Oil Grade C**	**†Diesel Oil Ships' Bunker**	**Gas Oil 28-34 Gravity**
New York harbor	*$1.30	*$1.95	4.50 – 5.00
Philadelphia district	*$1.30	*$1.95	4.50 – 5.00
Baltimore district	*$1.30	*$1.95	4.50 – 5.00
Norfolk district	*$1.30	*$1.95	....
Charleston district	$1.25	$1.95	....
Savannah district	$1.25	$1.95	....
Jacksonville district	*$1.25	$1.95	....
Portland district	$1.40	$2.05	....
Boston district	*$1.30	*$1.95	....
Providence district	$1.30	$1.95	....

*Lighterage for bunker oil, 5c per bbl. additional; for Diesel oil, 6.5c per bbl. additional. †Diesel oil at New York shore plants is 4.75c per gal. beginning May 28; Savannah and Jacksonville, 4.75c, beginning April 23.

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	Prices Sept. 4	Aug. 27	Aug. 20
53-55 U. S. Motor	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
400 e.p. blend 65 Octane and above	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25
Gas oil, 30-34 per bbl.	$1.05 –$1.10	$1.05 –$1.10	$1.05 –$1.10
Diesel oil, 27 plus, per bbl.	$1.05 –$1.10	$1.05 –$1.10	$1.05 –$1.10
Grade C bunker oil, for ships bunkers, per bbl.	$0.825–$0.85	$0.825–$0.85	$0.825–$0.85
Grade C bunker oil, in cargoes, per bbl.	$0.65 –$0.67	$0.65 –$0.67	$0.65 –$0.67
38-40, w.w. kero., 150 fire	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
Cased Goods			
Gasoline, U. S. Motor	$1.50 –$1.65	$1.50 –$1.65	$1.50 –$1.65
Gasoline, 400 e.p blend	$1.60 –$1.75	$1.60 –$1.75	$1.60 –$1.75
38-40 w.w. kero., 150 fire	$1.20 –$1.30	$1.20 –$1.30	$1.20 –$1.30
Kerosine, prime white	$1.15 –$1.20	$1.15 –$1.20	$1.10 –$1.20

New York Export Markets

(Prices in cents per gallon in barrels, F. a. s. New York)

CYLINDER OILS (Pennsylvania Products)	Sept. 4	Aug. 27	Aug. 20
Bright stock, No. 8 color	27.50 –27.75	27.00 –27.75	27.00 –27.75
Bright stock, No. 6½ color diluted	26.50 –27.00	26.00 –26.75	26.00 –26.75
Neutral 200 No. 3 color	34.50 –35.00	34.50 –35.00	34.50 –35.00
Neutral 150 No. 3 color	28.00 –28.50	28.00 –28.50	28.00 –28.50
600 Warren E filtered	22.25 –23.00	21.75 –22.25	21.75 –22.25
600 stm. refd. unfiltered	19.25 –19.50	18.50 –19.25	18.50 –19.25
650 stm. refd. unfiltered	21.75 –22.00	21.00 –21.75	21.00 –21.75
600 flash, steam refined	22.75 –23.00	22.00 –22.75	22.00 –22.75
630 flash, steam refined	26.00 –26.50	25.00 –26.00	25.00 –26.00

Wax Market

(Prices in cents per pound. Tests made by A. S. T. M. method with melting points converted into A. M. P. by adding 3° F. Export prices are f. a. s. carload lots. Domestic prices are f. o. b. refineries in New York and New Orleans harbor district, in bags, carload lots, with 0.2c discount allowed for shipment in bulk).

Prices—Sept. 4	New York		New Orleans	
	Domestic	Export	Domestic	Export
124-6 Y.C. scale	2.875– 3.00	2.875– 3.00	2.875– 3.00	2.875– 3.00
122-4 W.C. scale	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
124-6 W.C. scale	3.125– 3.25	3.125– 3.25	3.125– 3.25	3.125– 3.25
123-5 Fully refined	4.70	4.625	4.70	4.625
125-7 Fully refined	4.80	4.75	4.80	4.75
128-30 Fully refined	5.05	5.00	5.05	5.00
130-2 Fully refined	5.20	5.25	5.20	5.25
133-5 Fully refined	5.80	5.75	5.80	5.75
135-7 Fully refined	6.05	6.00	....	....

Gulf Coast Bulk Market

(Prices are f. o. b. Gulf oil terminals representing sellers' opinions except prices specified to the contrary. Prices cover bulk shipments of 20,000 barrels or more, unless otherwise noted.)

	Prices—Sept. 4	Aug. 27	Aug. 20
MOTOR GASOLINE: For Domestic Shipment			
59 octane and below	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
60-64 octane number	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
65 octane and above	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50
HEATING OILS			
No. 1 Heating oil	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50
No. 2 Heating oil	3.625– 3.875	3.625– 3.875	3.625– 3.875
No. 4 Heating oil	3.50 – 3.75	3.50 – 3.75	3.50 – 3.75
KEROSINE			
41-43 w.w.	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50
For Export Shipment			
GASOLINE			
U. S. Motor gasoline	4.125– 4.25	4.125– 4.25	4.125– 4.25
60-62, 400 e.p. gasoline	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375
61-63, 390 e.p. gasoline	4.375– 4.50	4.375– 4.50	4.375– 4.50
64-66, 375 e.p. gasoline	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
U. S. Motor, cases (cargoes)	$1.20 –$1.25	$1.20 –$1.25	$1.20 –$1.25
64-66, 375 e.p. cases (cargoes)	$1.25 –$1.30	$1.25 –$1.30	$1.25 –$1.30
KEROSINE			
44 water white	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375
41-43 water white	4.125– 4.25	4.125– 4.25	4.125– 4.25
41-43 prime white	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
W.W., cases (cargoes)	$1.15 –$1.20	$1.15 –$1.20	$1.15 –$1.20
P.W., cases (cargoes)	$1.10 –$1.15	$1.10 –$1.15	$1.10 –$1.15
For Domestic and/or Export Shipment			
GAS AND BUNKER OILS			
*26-30 translucent gas oil	3.375– 3.50	3.375– 3.50	3.375– 3.50
*30 plus translucent gas oil	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
**30 plus transp. gas oil	3.50 – 3.75	3.50 – 3.75	3.50 – 3.75
Diesel Oil ships' bunkers	†$1.80	†$1.80	†$1.80
Grade C bunker oil, for ships' bunkers, per bbl.	†$1.15	†$1.15	†$1.15
Grade C bunker oil, per bbl. in cargoes	$0.80 –$0.85	$0.80 –$0.85	$0.80 –$0.85

*Less than ½ of 1% sulphur. †Lighterage 5c per bbl. additional.
**Less than ½ of 1% sulphur; Maximum No. 3 color.

MEXICAN CRUDE AND BUNKER OILS (f.o.b. Steamer, Tampico)

Heavy Panuco crude taxes to be paid, per bbl.	$1.00	$1.00	$1.00
Grade C bunker oil, ships' bunkers, taxes paid, per bbl.	$1.05	$1.05	$1.05

SOUTH TEXAS LUBRICATING OILS (Viscosity at 100° F. cold test 0) (Tanker, f.o.b. Gulf oil terminals.)

100 vis. No. 3 unfilt. pale	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
200 vis. No. 3 unfilt. pale	6.375– 7.00	6.375– 7.00	6.375– 7.00
300 vis. No. 3 unfilt. pale	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
500 vis. No. 3½ unfilt. pale	7.875– 8.50	7.875– 8.50	7.875– 8.50
750 vis. No. 4 unfilt. pale	8.75 – 9.50	8.75 – 9.50	8.75 – 9.50
1200 vis. No. 4 unfilt. pale	9.25 –10.00	9.25 –10.00	9.25 –10.00
2000 vis. No. 4 unfilt. pale	9.50 –10.25	9.50 –10.25	9.50 –10.25
100 vis. No. 5-6 red oil	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
200 vis. No. 5-6 red oil	6.125– 6.75	6.125– 6.75	6.125– 6.75
300 vis. No. 5-6 red oil	6.375– 6.75	6.375– 6.75	6.375– 6.75
500 vis. No. 5-6 red oil	7.625– 8.00	7.625– 8.00	7.625– 8.00
750 vis. No. 5-6 red oil	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
1200 vis. No. 5-6 red oil	9.25 – 9.75	9.25 – 9.75	9.25 – 9.75
2000 vis. No. 5-6 red oil	9.75 –10.25	9.75 –10.25	9.75 –10.25

Note: Red oil prices shown above cover oils with green cast; blue cast, red oils are slightly lower in some cases.

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to U. S. ports, cents per barrel)

	Crude &/or Fuel		Refined Oil &/or Spirits	
Rates—Sept. 4	**Last Paid**	**Owners Ask**	**Last Paid**	**Owners Ask**
Calif.-U.K./Continent*	12/6	18/-19/	19/	19/-21/
Gulf.-U.K./Continent*	9/	9/-10/	11/6	11/6-12/6
Calif.-N. Atlantic (not E. of N. Y.)	45c	50-55c	55c	50-55c
Gulf-N. Atlantic** (not E. of N. Y.)	17c	16-17c	17.5c	17-18c

*Continental ports in range between Bordeaux and Hamburg, both inclusive.
**Venezuela loading same rate; Tampico 2c to 3c per bbl. additional.

Crude Oil Prices (In Effect Sept. 3, 1934)

Crude prices for the whole year in OIL PRICE HANDBOOK published annually
(Prices are per barrel of 42 U. S. Gallons at the well; A. P. I. Gravity)

EASTERN FIELDS

Posted by Joseph Seep Purchasing Agency
(Effective May 1, 1934, except Corning effective Oct. 2, 1933)

Penna. Grade Oil in Southwest Penna. Pipe Lines.....$2.22
Penna. Grade Oil in Eureka Pipe Lines (West Virginia).....$2.17
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.).....$2.07
Corning Oil in Buckeye Pipe Lines (Ohio)..$1.32
†For Macksburg oil run previous to March 1 1932, $2.02, effective May 1, 1934.

Posted by Other Companies

Tide Water Pipe Co., Ltd.:
Bradford-Alleghany district (Penna. and N. Y.) (Effective May 1, 1934).....$2.55
*The Pennzoil Co.: (Effective May 1, 1934)
Penna. Grade Oil in National Transit Lines*$2.47
Ashland Oil & Transportation Co.: (Effective Sept. 10, 1933):
Somerset Oil in Ashland Lines (Ky.).....$1.23
*The Pennzoil Co. posts $2.47 in Cochran, Franklin, Hamilton and Doolittle, Pa. fields; prices in their districts range down to $2.42 per bbl. at wells.

MICHIGAN

(Posted by Pure Oil Co.)

Midland, Midland County (Sept. 30, 1933)..$1.02

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

(Effective Sept. 29, 1933)
Lima.....$1.30
Princeton.....$1.13
(Effective May 26, 1934)
West. Kentucky $1.08
(Effective Jan. 5, 1934)
Illinois.....$1.13

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Western Ontario

(Effective 7 a. m. Sept. 9, 1933)

Petrolia.....$2.10
Oil Springs.....$2.17

Alberta

Turner Valley
(Prices f.o.b. field tankage)

Crude:
(Effective 7 a.m. Dec. 9, 1933)
40-44.9.....$1.50
45-49.9..... 2.07
(Effective 7 a.m. May 21, 1934)
50 and above....$2.19

Naphtha:
(Effective 7 a.m. May 21, 1934)
†Clear.....$2.31
†Discolored.....$2.55

†Clear naphtha: 22 color; 10 lbs. vapor pressure, Reid method; 90% recovery; end point, 410°. Discolored naphtha: same specifications as for clear naphtha except color.

MID-CONTINENT

Prices of Stanolind Crude Oil Purchasing Co.
(Effective 7 a. m. Sept. 29, 1933)

(In Oklahoma-Kansas)	(In North-North Central Texas)
Below 29.....$0.84	$0.79
29-29.9..... 0.86	0.81
30-30.9..... 0.88	0.83
31-31.9..... 0.90	0.85
32-32.9..... 0.92	0.87
33-33.9..... 0.94	0.89
34-34.9..... 0.96	0.91
35-35.9..... 0.98	0.93
36-36.9..... 1.00	0.95
37-37.9..... 1.02	0.97
38-38.9..... 1.04	0.99
39-39.9..... 1.06	1.01
40 and above..... 1.08	1.03

Above Stanolind prices met as follows:

Sept. 29, by The Texas Co. in Oklahoma, and in North and North Central Texas; Continental Oil in all three states; by Empire, White Eagle and Gypsy (Gulf).

See also Carter Oil, Magnolia, Humble schedules below and footnotes under Carter table.

Prices of Carter Oil Co.
(In Oklahoma and Kansas)
(Effective 7 a. m. Sept. 29, 1933)

Below 25.....$0.76	33-33.9.....$0.94
25-25.9..... 0.78	34-34.9..... 0.96
26-26.9..... 0.80	35-35.9..... 0.98
27-27.9..... 0.82	36-36.9..... 1.00
28-28.9..... 0.84	37-37.9..... 1.02
29-29.9..... 0.86	38-38.9..... 1.04
30-30.9..... 0.88	39-39.9..... 1.06
31-31.9..... 0.90	40 and above... 1.08
32-32.9..... 0.92	

Sept. 29, Carter gravity and price schedule met in Oklahoma-Kansas by Sinclair-Prairie, and Humble price schedule met in North-North Central Texas except that Sinclair-Prairie posts five lower grades down to below 25, with 2c differential for each. Same day, Shell Petroleum met Carter in full in Oklahoma-Kansas.

Prices in Magnolia Petroleum Co.
(Effective 7 a. m. Sept. 29, 1933)

In Oklahoma, same schedule as Carter Oil, which see above, beginning with below 25, at $0.76 and ending with 40 & above, at $1.08.

In Texas: North and North Central, including Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden; and in Central Texas, including Mexia, Wortham, and Panola county, same gravity and price schedule as Stanolind in Texas, which see below, beginning with below 29 at $0.79, and ending with 40 & above, at $1.03.

MID-CONTINENT (Continued)

Prices of Humble Oil & Refining Co.
(*In North, North Central and Central Texas
(Effective 7 a.m. Sept. 29, 1933)

Below 29.....$0.79	35-35.9.....$0.93
29-29.9..... 0.81	36-36.9..... 0.95
30-30.9..... 0.83	37-37.9..... 0.97
31-31.9..... 0.85	38-38.9..... 0.99
32-32.9..... 0.87	39-39.9..... 1.01
33-33.9..... 0.89	40 and above... 1.03
34-34.9..... 0.91	

*Including North Texas, Ranger, Mexia, Powell Boggy Creek, Richland, Wortham, Currie and Moran fields.

PANHANDLE TEXAS

Humble Oil & Refining Co.
(Effective 7 a.m. Sept. 29, 1933)

	Gray County	Carson-Hutchinson
Below 35.....	$0.79	$0.69
35-35.9.....	0.81	0.71
36-36.9.....	0.83	0.73
37-37.9.....	0.85	0.75
38-38.9.....	0.87	0.77
39-39.9.....	0.89	0.79
40 & above.....	0.91	0.81

Sept. 29, above prices met by Sinclair-Prairie, Magnolia and The Texas Co. in the entire area, also by Continental Oil in Carson-Hutchinson.

EAST TEXAS

(Effective 7 a.m. Sept. 29, 1933)

Stanolind, Humble, Sinclair-Prairie, Texas and Magnolia.....$1.00

WEST TEXAS and NEW MEXICO

Humble Oil & Refining Co.
(Effective 7 a.m. Sept. 29, 1933)

Ector, Pecos and Winkler Counties, W. Texas and Lea Co., N. M.....$0.75
Crane, Upton, Crocket, Howard and Glasscock county, W. Tex.....$0.70

Sept. 29, Magnolia met in Crane, Upton, Howard, Glasscock, Mitchell and Winkler. Sept. 29, Texas Co. met Humble in Winkler, Crane, Upton and Lea counties; Stanolind Oil & Gas met in Hendrich field, Winkler county and posted in Marion county Tex. below 25 at $0.63, plus 2c differential to 40 & above at $0.95.

SOUTH and SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)
(Effective 7 a.m. Sept. 29, 1933)

Darst Creek.....$0.87	Mirando.....$0.80
Salt Flat..... 0.87	Pettus..... 1.05
Saxet..... 0.85	Tomball..... 1.15

Sept. 30, The Texas Co. met Humble in Darst Creek. On Sept. 29 it posted $0.80 in Duval county and $0.85 in Saxet-Greta.

(Continued on next page)

CALIFORNIA CRUDE

Standard Oil Co. of California

All gravities above those quoted take highest price offered in the field)
Effective 7 a. m. Sept. 6, 1933

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Paula (Union Oil Co.)	Orcutt (Union Oil Co.)
14-14.9	$0.65	$0.65	$0.65	$0.65	$0.65	$0.65	....	....	$0.65	$0.65	$0.65	$0.65	$0.65	....	$0.57	$0.57	$0.57	$0.57	$0.57	$0.57	....
15-15.9	.65	.65	.69	.69	.66	.69	....	....	.66	.65	.65	.65	.65	....	.57	.57	.57	.57	.57	.57	....
16-16.9	.66	.65	.72	.73	.69	.73	....	....	.69	.67	.68	.65	.65	....	.57	.57	.57	.57	.57	.57	$0.57
17-17.9	.69	.65	.75	.76	.73	.76	....	....	.72	.70	.71	.65	.68	....	.57	.57	.57	.57	.57	.57	.57
18-18.9	.72	.65	.78	.80	.76	.79	....	....	.75	.74	.74	.65	.71	....	.57	.61	.61	.59	.58	.60	.61
19-19.9	.75	.65	.81	.83	.80	.82	....	....	.78	.78	.78	.65	.74	....	.57	.64	.65	.62	.61	.63	.64
20-20.9	.78	.68	.83	.87	.83	.85	....	....	.81	.82	.81	.66	.78	....	....	.67	.69	.65	.64	.66	.67
21-21.9	.81	.72	.86	.90	.87	.88	....	....	.83	.85	.85	.69	.81	$0.72	....	.70	.73	.68	.67	.69	.70
22-22.9	.84	.76	.89	.94	.90	.92	....	F.O.B. Ship-	.86	.89	.87	.72	.84	.76	....	.73	.76	.72	.70	.72	.73
23-23.9	.88	.81	.92	.97	.94	.95	$0.83	....	.89	.93	.90	.76	.87	.79	....	.77	.79	.75	.73	.75	.77
24-24.9	.91	.85	.95	1.01	.97	.98	.86	....	.92	.97	.93	.80	.90	.83	....	.81	.82	.78	.76	.78	.81
25-25.9	.94	.89	.98	....	1.00	1.01	.90	....	.95	1.00	....	.85	.93	.87	....	.85	.85	.81	.79	.81	.85
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	....	.98	1.04	....	.89	.96	.90	....	.89	.88	....	....	.84	.89
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	....	1.08	....	....	.99	.94	....	.93	.91	....	....	.88	....
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	....	1.11	....	....	1.02	.98	....	.97	.94	....	....	.92	....
29-29.9	1.06	1.06	1.09	....	....	....	1.04	....	....	1.15	....	....	1.05	1.01	....	1.01	.97	....	....	.96	....
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....				1.09	1.05	....	1.05	1.00	....	....	1.00	....
31-31.9	....	....	....	....	....	....	1.12	....	....				1.12	1.08	....	1.09	....	....	....	....	....
32-32.9	....	....	....	....	....	....	1.15	....	....	Kettleman Hills			1.15	1.12	....	1.13	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	$1.03	....	$0.93			1.18	1.16	....	1.17	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	1.06	....	.96			1.21	1.19	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	1.09	....	.99			....	1.23	....	....	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	1.12	....	1.02			....	1.26	....	....	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	1.15	....	1.05			....	1.30	....	....	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	1.08			....	1.34	....	....	....	....	....	....	....
39-39.9	....	....	....	....	....	....	....	....	....	1.11			....	....	....	....	....	....	....	....	....

Subject to Field Gathering Charge of 5cper Bbl.

(Crude Oil Prices continued on next page)

Crude Oil Prices (In Effect Sept. 3, 1934)

(Continued from preceding page)

SOUTH TEXAS (Continued)

Oct. 2, Magnolia posted $0.87 in Darst Creek and $1.15 in Tomball; Sept. 29 it posted $0.80 in Mirando, $0.75 in Luling and $0.95 in Lytton Springs. Jan. 11, 1934 Magnolia posted $1.00 for Cleveland, Liberty county, Tex.

Humble

Conroe (Montgomery Co., Tex.)

(Effective 7 a. m. Sept. 29, 1933)

35-35.9	$1.09	38-38.9	$1.15
36-36.9	1.11	39-39.9	1.17
37-37.9	1.13	40 & above	1.19

Sept. 30 Texas Co. met above prices.

NORTH LOUISIANA-ARKANSAS

Prices of Standard Oil Co. of Louisiana

(Effective 7 a. m. March 17, 1934, except Homer, Smackover and Nevada county Sept. 29, 1933) (In Caddo, Homer, Haynesville, Sabine, De Soto, Sarepta, Carterville, El Dorado and Miller county)

Below 25	$0.71	33-33.9	$0.89
25-25.9	0.73	34-34.9	0.91
26-26.9	0.75	35-35.9	0.93
27-27.9	0.77	36-36.9	0.95
28-28.9	0.79	37-37.9	0.97
29-29.9	0.81	38-38.9	0.99
30-30.9	0.83	39-39.9	1.01
31-31.9	0.85	40 and above	1.03
32-32.9	0.87		

Smackover, Ark	$0.70
Nevada, Ark	0.60
Urania, La. (La. Oil Refg. Co., Jan. 1, '34)	0.87

*GULF COASTAL

Posted by Humble Oil & Refining Co.

(Effective 7 a. m. Sept. 29, 1933)

Below 20	$0.82	27-27.9	$0.98
20-20.9	0.84	28-28.9	1.00
21-21.9	0.86	29-29.9	1.02
22-22.9	0.88	30-30.9	1.04
23-23.9	0.90	31-31.9	1.06
24-24.9	0.92	32-32.9	1.08
25-25.9	0.94	33-33.9	1.10
26-26.9	0.96	34 and above	1.12
Refugio heavy			$0.85

GULF COASTAL—(Continued)

*Includes these fields: Barbers Hill, Goose Creek, Hull, Humble, Liberty, Moss Bluff, Orange, Pierce Junction, Rabbs Ridge, Raccoon Bend, Refugio light, Sour Lake, Spindletop, Sugerland and West Columbia.

Above prices met Sept. 29 by Sinclair-Prairie and Sun Pipe Line Co.

The Texas Co.

(Effective 7 a. m. Sept. 30, 1933)

Same gravity and price schedule as Humble up to 30-30.9 gravity, which see; plus these grades:

30-30.9	$1.04	36-36.9	$1.10
31-31.9	1.05	37-37.9	1.11
32-32.9	1.06	38-38.9	1.12
33-33.9	1.07	39-39.9	1.13
34-34.9	1.08	40 and above	1.14
35-35.9	1.09		

ROCKY MOUNTAIN FIELDS

Posted by Stanolind Oil & Gas Co.

(Effective 7 a. m. Sept. 29, 1933)

Salt Creek and Dutton Creek, Wyo. Same schedule as Stanolind posts in Oklahoma-Kansas which see on first crude price page.

Elk Basin, light	$1.18
Grass Creek, light	1.18
Greybull-Torchlight	1.18
Iles, light, Col.	0.95
Iles, heavy	0.90
Hogback, N. M.	1.11
Frannie light (Effective May 1, 1934)	0.70
Frannie heavy	0.62

Posted by Ohio Oil Co.

(Effective 7 a. m. Sept. 29, 1933)

Elk Basin, Wyo.	$1.18
Grass Creek, light	1.18
Rock Creek	1.02
Big Muddy	1.01
Sunburst, Mont.	1.35

Posted by *International Refining Co.

(Effective 7 a. m. May 23, 1934)

Cutbank, Mont.	$1.45

*Texas Co. subsidiary.

NEW REFINING PATENTS

Gasoline From Gas. U. S. P. 1 961-288, June 5, 1934, application filed Sept. 1, 1928; Wm. F. Faber, assignor to Victor N. Roadstrum.

THIS invention provides a novel method for making gasoline, rich in benzene hydrocarbons, from the fixed gases and very light liquid hydrocarbons encountered or formed in the production and refining of petroleum. These gaseous or highly volatile hydrocarbons are subjected to a process of pyrolysis and partial combustion which converts them, without carbon deposition, into a liquid fraction boiling mainly in the gasoline range and a gas fraction which is more suitable than the original gas for use as fuel. The conversion is effected by mixing the hydrocarbon gas with a quantity of air insufficient for complete combustion, heating the mixture and passing it to a reforming zone between 900 and 1800 degrees F., the heat of combustion in this zone being a major source of heat for the operation, and withdrawing the gaseous products in heat exchange relation with incoming air so that the air for the process is preheated. The liquid products are then condensed and the uncondensed gas is a fuel gas with a calorific value of 250-650 B.t.u. per cu. ft.

Claims

Making combustible fixed gas and a heavier gasoline distillate from a light paraffin hydrocarbon substance by preheating a continuous inflow of air and mixing it continuously and uniformly in predetermined ratio with the hydrocarbon material but in quantity sufficient only for partial combustion, further heating the mixture in passage to a non-catalytic hot gas reforming zone maintained at a predetermined temperature between about 900 and 1800 degrees F., according to the nature of the hydrocarbon material and of the desired products, permitting partial combustion in the reforming zone to generate heat and effect a reforming of the hydrocarbon, forming a gas and a gasoline distillate which are then separated.

Anti-Knock Gasoline. U. S. P. 1 958 528, May 15, 1934, application filed Nov. 28, 1930; Robert E. Wilson, assignor to Standard Oil Co. of Indiana.

AS A novel means for reducing the overall cost of producing anti-knock gasoline by hydrogenation, it has been found that the liquid and vapor phase methods of hydrogenation can be effectively combined in a single operating sequence which makes it unnecessary to condense and revaporize the relatively high-boiling product of liquid phase hydrogenation before subjecting it to vapor phase hydrogenation. The transition from liquid to vapor phase operation is effected by mixing the effluent vapor from the liquid phase hydrogenation with the highly superheated vapor of a light stock such as a high sulfur gas oil or naphtha bottoms, and contacting the mixture with a catalyst at high temperatures and pressures. Under these conditions a gasoline with high anti-knock value is produced, while at the same time desulfurizing and stabilizing effects may be obtained.

Claims

Converting relatively heavy hydrocarbons into anti-knock gasoline by subjecting the hydrocarbons to destructive liquid phase hydrogenation, withdrawing gases and vapors, separately superheating other light hydrocarbon vapors above the temperature of the liquid phase hydrogenation, mixing these superheated vapors with those from the liquid phase treatment, and subjecting the mixture to destructive vapor phase hydrogenation in presence of a hydrogenation catalyst at a higher temperature and lower hydrogen partial pressure than in the liquid phase hydrogenation.

* * *

Cracking Oil. U. S. P. 1 962 235, June 12, 1934, application filed Dec. 11, 1923; Luis de Florez, assignor to the Texas Co.

IN A novel cyclic process for cracking heavy oils, with separate treatment for heavy and intermediate fractions, notable operating economies are effected and the troubles incident to carbon deposition are practically eliminated. The method comprises topping a crude and cracking the residue in two stages, the intermediate distillates being first subjected to suitable cracking conditions and the residuum being then cracked under different conditions, utilizing the heat contained in the products from the first stage. Since the second (heavy oil) stage requires only a small amount of extraneously supplied heat, carbon deposition is kept well under control and the liberated carbon does not stick to the still walls. The residuum is cracked by direct admixture with the hot products from the cracked lighter fractions, the hot mixture is topped, the intermediate fractions are taken off for separate crack-

ing as was done with the original charging stock, and the cracked products from the second stage are recycled to the still containing the residue from the original topping. Fresh topped residue is supplied to this still as required.

Claims

Cracking oil by topping the oil in an independently fired still, distilling off an intermediate cracking stock, leaving the higher boiling fractions as bottoms, cracking the cracking stock, blending the cracked stock and bottoms in a second still, topping, taking off an intermediate cracking stock from the second still, separately collecting the tops and intermediate products, circulating the intermediate products from the second still through a cracking unit and back to the second still, and introducing fresh bottoms to the second still.

* * *

Refining Lubricants. U. S. P. 1 962 622, June 12, 1934, application filed Sept. 28, 1932; Wm. M. Stratford, assignor to the Texas Co.

IN THE refining of lubricant distillates by solvent extration it has been found that liquid trimethylene is a particularly potent solvent for removing components which lower the viscosity index of the lubricant. This may be attributed to the extremely polar nature of trimethylene, permitting it to dissolve polar hydrocarbons although it is not a solvent for the desirable non-polar hydrocarbons in the lubricant. Oils extracted with liquid trimethylene are also characterized by very low sulfur content and extremely high resistance to oxidation. Owing to its extreme volatility trimethylene is easily and completely removed from the treated oil; yet the pressure required for liquefaction is not so great as to call for the use of massive high pressure equipment.

Claims

Producing a lubricant with high viscosity by mixing and agitating a lubricant distillate with liquid trimethylene under such temperatures and pressures as to maintain the liquid state, allowing the mixture to stratify by settling, drawing off the upper layer of treated oil and a relatively small amount of trimethylene, and separating the trimethylene from the treated oil by distillation.

* * *

Refining Oils With Sodium. U. S. P. 1 962 698, June 12, 1934, application filed July 16, 1931; Richard S. Vose, assignor to E. I. du Pont de Nemours & Co.

IN THE oil refining process which uses metallic sodium or a like metal as the refining agent, the reagent is relatively expensive and losses due to contamination of the reagent with polymerized components in the oil present a serious obstacle to profitable operation. By a novel combination of a two stage process with a single stage process, it is now possible to obtain practically complete utilization of the metallic reagent while keeping operating costs at an economical level. In the two stage process the oil is first treated with a small amount of sodium, which is thoroughly used up; then the resulting polymers are removed and the final refining effect is obtained by means of an ample excess of sodium. From this stage the mixture of sodium and polymers is recovered and used as the reagent in the single stage process, in which the proportion of oil and reagent is such as to give the desired effect in one operation. The mixture of sodium and polymers from this stage is then returned to the first stage of the two stage process.

Claims

A cyclic oil refining process comprising treating the oil with a mixture of alkali metal and polymer at a temperature above the melting point of the alkali metal until the metal is completely spent, removing polymer, completing the refining by treating with fresh alkali metal in large excess, separating refined oil, utilizing the recovered metal-polymer mixture for complete refining of untreated oil in such amount that the metal is not quite totally used up, separating refined oil, and utilizing the residual metal-polymer mixture, with fresh oil, to renew the cycle.

* * *

Fractionation. U. S. P. 1 962 153, June 12, 1934, application filed June 18, 1931; Albert G. Peterkin, Jr., assignor to Atlantic Refining Co.

IN THE fractional distillation of petroleum oils, entrainment of liquid droplets in vapor fractions is a difficulty which has called forth many proposals for preventive expedients and devices. None of these proposals however, has been successfully effective against the entrainment of liquid from the initial body of oil in the first vaporization step, as distinguished from entrainment from the successive liquid pools through which the ascending vapor is bubbled. This type of initial entrainment is especially severe in pipe stills, so that their superior efficiency is not fully utilized. It has now been found that suitably disposed beds of steel wool, bronze wool, slag wool or like mineral fibers give very effective separation of entrained liquid from the vapor, with only a negligible pressure drop, so that the efficiency of the pipe still remains unimpaired while the entrainment evil is thoroughly overcome.

Claims

In continuous fractionation of oils, passing the oil at high speed in a confined narrow, elongated stream through a heating zone to vaporize a portion of the oil, allowing the bulk of the unvaporized oil to separate from the rapidly moving vapor, and continuously passing the vapor at high speed through a compact filamentous mass of heat-resisting material having 93% or more of void space, thereby to effect efficient separation of entrained liquid from the vapor.

* * *

Refining Cracked Distillates. U. S. P. 1 962 204, June 12, 1934, application filed Sept. 23, 1931; Jacque C. Morrell, assignor to Universal Oil Products Co.

BECAUSE of the inherent disadvantages of the sulfuric acid method of refining cracked gasolines, numerous expedients have been tried in the search for better methods. Some success has been had with vapor phase treatment with solid adsorbents; but no treatment has been found which can completely supersede the sulfuric acid method. Dilute sulfuric acid would be a much more satisfactory reagent than the concentrated acid; but water dilution is not feasible because the diluted acid soon becomes concentrated under the conditions of use. It has now been found, however, that an effect equivalent to water dilution can be obtained with non-volatile acids or salts, which moderate the action of the sulfuric acid without being lost or destroyed during the use of the acid. The new diluents may be organic acids such as acetic, chloracetic, propionic, butyric, benzenesulfonic or like acids; or they may be salts of these acids or of inorganic acids. Using sulfuric acids containing these diluents, vapor phase refining of cracked gasolines can be carried on very efficiently and economically.

Claim

Subjecting hot vapors of petroleum distillates to the action of sulfuric acid in presence of chloroacetic acid, benzenesulfonic acid, phthalic acid or the like, or the salts of such acids.

* * *

Gasoline From Propane. U. S. P. 1 965 135, July 3, 1934, application filed Oct. 20, 1930; Henry H. Chesny, assignor to Union Oil Co. of California.

IN THE pyrolysis and polymerization of light hydrocarbon gases it has been found, particularly in relation to an overhead fraction from the stabilizing column of a gasoline absorption plant, that large yields of gasoline are obtained if the optimum conversion temperature is closely maintained. For the specified overhead fraction, which contains about 75% propane, the optimum conversion temperature is between 906° and 921°C. Either above or below this temperature range the gasoline yield is materially reduced. It is also important to carry out the conversion in a tube of non-ferrous material, e. g. fused quartz or a ceramic material, or copper or other non-ferrous metal not having an anticatalytic effect.

Claims

Converting a hydrocarbon gas, containing a major proportion of propane, into gasoline by the action of heat within the temperature range 906-921°C.

Refiners' & Compounders' Supplies

Following are average market prices for materials used by refiners and compounders effective on the date shown.

	Sept. 4	Aug. 27
Refiners' Supplies		
Soda Ash light 58..bags, cwt.	$1.23-1.30	$1.23-1.30
Silicate of Soda 60 deg. drums ....cwt.	$1.75-1.90	$1.75-1.90
Silicate of Soda 40 deg. drums ....cwt.	$0.70-1.00	$0.70-1.00
Sal Soda whs....	$0.90-1.00	$0.90-1.00
Caustic Soda 76% solid..cwt.	$2.60	$2.60
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton....	$11.00-12.50	$11.00-12.50
Sulfur, flowers of.....cwt.	$2.50-3.40	$2.50-3.40
Liquid Chlorine, tank cars, whs.....lb.	$1.85-2.25	$1.85-2.25
Compounders' Supplies		
Vegetable Oils		
Linseed carloads, spot.....lb.	9.10–9.30	9.10–9.30
Tank, spot.....	9.30–9.50	9.30–9.50
Soya Bean, Tank, coast...lb.	7.00	7.00
Oleic Acid		
Distill, tanks.....lb.	6.50	6.50
Distilled, bbls.....lb.	7.375	7.375
Saponified, tanks.....lb.	7.00	7.00
Saponified, bbls.....lb	7.50	7.50
Lard Oils		
Prime Winter Strained....lb.	9.00	9.00
Extra Winter Strained....lb.	8.25	8.25
Extra No. 1.....lb.	7.75	7.75
No. 1.....lb.	7.25	7.25
No. 2.....lb.	6.875	6.875
Tallow oil.....lb.	7.50	7.50
Neatsfoot Oil		
Pure, bbls.....lb.	12.75	12.75
Extra, bbls.....lb.	8.00	8.00
No. 1 bbls.....lb.	7.75	7.75
Cold test, 20 degrees.....lb.	16.00	16.00
Naval Stores		
Steam distilled turpentine, N. Y.....gal.	46.50	44.00
Steam distilled turpentine, Savannah.....gal.	41.00	37.00
Gum turpentine, N. Y...gal.	48.00	48.00
Gum turpentine, f.o.b. cars Savannah.....gal.	43.00	43.00
Wood Rosin, N. Y.....bbl.	$5.15	$5.15
Wood Rosin, F, Savn'h..bbl.	$4.15	$4.15
Gum Rosin B, N. Y.....bbl.	$5.35	$5.35
Gum Rosin B, f.o.b. cars Savannah.....bbl.	$4.10	$4.10
Rosin oil, pure.....gal.	48	48
Rosin oil, compounded...gal.	59	53-59
Pine Tar		
Kiln burnt.....$12.00-12.50	$12.00-12.50	
Retort.....bbl.	$12.50	$12.50
Alcohol		
Denatured Formula 5, per gal., in bbls., car lots.....	34–35	34–35

Socony-Vacuum Has Aviation Magazine

NEW YORK—A new oil company house organ devoted entirely to aviation news and named appropriately "R P M", made its appearance in August. It is being published by the Socony-Vacuum Oil Co.

L. A. McVey, of the aviation department of the company, is editor. The new mazine, to be published bi-monthly, will chronicle news of improvements in operation of aircraft engines and particularly the developments of lubrication in aviation.

The first issue includes a lubrication chart for all makes of aircraft engines. Socony-Vacuum recently purchased two new airplanes, a Beechcraft and a Stinson Reliant.

TALKING GEARS!

Gentlemen, if automobile gears talked they would tell you—

- How they are overloaded;
- How they are started, jerked and stopped;
- How they must go up and down hills over roads that are good, bad and indifferent;
- How they must travel at a speed from one to one hundred miles per hour;
- How easy all of it would be if they were lubricated with GearO and that they would live longer and do a better job; as GearO is the greatest of all Extreme Pressure Lubricants.
- How glad they would be to have you write to the American Oil & Grease Corporation, 201 North Wells Street, Chicago, Illinois, about the greatest of all lubricants for enclosed gears, *GearO!*

Thanks.

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Valuable to grease makers, refinery executives, research chemists, lubricating engineers, salesmen and others interested in the efficient manufacture and utilization of lubricating greases.

Contains chemical analyses of many commercial lubricants, abstracts of important patents, and formulas and practical processes for the manufacture of greases.

CHAPTER HEADINGS:
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198 *pages Illustrated Price* $5.50

NATIONAL PETROLEUM NEWS
1213 W. 3rd St. Cleveland, Ohio

Indiana Independent Marketers Organize New Association

INDIANAPOLIS

A NEW association for all types of marketers, regardless of method of operation, is being organized now in Indiana to succeed the former jobbers' association.

The Indiana Independent Petroleum Association, Inc., is the formal title of the organization, and efforts now are being pointed toward the first convention Oct. 24 and 25 in the Severin hotel, Indianapolis.

For many years the Indiana Petroleum Association was the jobbers' organization until it was dissolved, legally and by mutual consent, at a meeting Aug. 10 in Indianapolis, and the new association organized.

Officials of the former organization retain their offices until an election can be held at the convention in October. Officers are Louis J. Scheidt, Power-Plus Oil Co., Columbus, president; G. L. Horton, Horton Oil Refining Co., Indianapolis, treasurer; and Max L Wickersham, Indianapolis, secretary.

Directors are C. A. Davies, Davies Oil Co., Delphi; C. E. Foreman, Mid-Western Petroleum Co., Indianapolis; W. F. Small, Arrow Oil Co., Peru; E. C. Storm, Tri-Point Oil Co., Madison; L. W. Stuckey, Eastern Indiana Oil & Supply Co., Geneva; Phil Williams, Gaseteria, Inc., Indianapolis; and Mr. Horton.

Independent marketers are organizing county units of the new association, and Mr. Wickersham reports that indications point to a well attended convention in October.

The new association is to be "an affiliation of all independent marketers, regardless of marketing policies," Mr. Wickersham said.

Open Bids For Chicago Post Office Gasoline

CHICAGO, Aug. 30.—Twelve companies submitted bids to supply the Chicago post office with approximately 225,000 gallons of U. S. Motor specification gasoline during the last quarter of 1934. All bids were for tank wagon delivery.

Bids on above 60 octane gasoline were: Jewett & Sowers Oil Co., bidders posted t.w. price of 8.5 cents, maximum 10.62 cents, with 2 cents discount for over 10,000 gallons a month; Standard Oil Co. of Indiana, bidders t.w. 12.3 cents, maximum 15.125 cents, 2 cents discount over 10,000 gallons monthly; Seneca Petroleum Co., bidders t.w. 11.3 cents, maximum 14.125 cents, 2 cents discount over 10,000 gallons monthly; High Test Oil Co., bidders t.w. 9.16 cents, maximum 11.02 cents, 2 cents discount over 10,000 gallons monthly; Lynch-Clarisey Co., bidders t.w. 12.1 cents, no maximum; 2 cents discount over 10,000 gallons monthly.

Bids on below 60 octane were: S. O. Indiana, Deep Rock Oil Co., The Texas Co., Phillips Petroleum Co., Shell Petroleum Corp., and Sinclair Refining Co., bidders t.w. 10.8c, maximum 13.25 cents, 1 cent discount over 10,000 gallons monthly; Continental Oil Co., bidders t.w. 12.8 cents, maximum 15.75 cents, 1 cent discount over 10,000 gallons monthly.

The Royal Oil Co. made a flat net bid of 8.624 cents with no octane rating specified.

Investigator Cole Guest at Oil City Dinner

OIL CITY, Pa., Sept. 4.—Congressman William P. Cole, of Maryland, chairman of the house interstate commerce sub-committee investigating the oil industry, was the guest of the Pennsylvania Grade Crude Oil association at a dinner here August 28.

Mr. Cole told the oil men present that his committee is making a most thorough, detailed and exhaustive study of conditions in the oil industry, to lay before the next congress as a basis for future legislation. He stressed the importance to the oil industry of placing all the facts at the disposal of his committee, so that it may be better able to interpret the best interests of the industry as a whole.

Representative Cole came to Titusville to attend the dedication of Drake Memorial Park. He reviewed the work this summer of his investigating committee and said that later hearings would be held in Washington for the eastern districts, and in Oklahoma and California for the Mid-Continent and Pacific coast areas.

T. P. Thompson, Jr., president of the Pennsylvania Grade Crude Oil Assn., presided at the dinner. In addition to Mr. Cole, the following made short comments; S. Y. Ramage, an oil man since 1879; Charles L. Suhr, president of Pennzoil Co; and T. O. Grisell, secretary of the association.

Letters to the Editor

Why the Increase to $5

Dear Editor:

How come Mr. Platt? Are costs higher than they were in 1929, or are you one of those who need some competition in your field to keep your prices down?

I can't reconcile the increase of $1.50 on your subscription with the fact that you probably have the easiest and most economical means of gathering news with the way things are centralized at Washington. The gang at Washington always furnish you something each week to fill your pages with. That should make your job easier without blaming NRA.

B. Richards,
Independent Gas & Oil Co.,
Price, Utah.

* * *

A Better N.P.N. Costs More

Dear Mr. Richards:

Thanks for your subscription and your check for $5 but I want to acknowledge your note of the 16th—

We have had very considerable increases in our publishing costs. There is a code in the paper industry which has raised the price of paper to us quite materially. There is a code in the printing industry which has raised the cost of labor in the printshop. While ours is one of the most efficient shops in the country, nevertheless we are paying for the printing code. Then there is a very efficient code in the engraving industry which has raised our half-tone costs quite radically.

You speak about the ease with which we are getting news these days and refer to it as so economical. It isn't so hard to get the news if you work for it but it is quite costly. We have had to add a man to our Washington staff and open up more office space. We have installed a teletype machine there and you know our branch offices in Tulsa, New York and Chicago are all connected with teletype. So much of the news from Washington has to be handled by teletype because of its importance.

We also have been put to a great deal additional expense in covering all the various oil code activities all over the country. Our traveling expense alone, has been a very considerable item. This increased activity the past year has made it necessary to put on more men.

So you see, we have every reason to ask for this $1.50 a year increase, which even then, will not cover the additional expense that we are put to by reason of the new activities of the past year.

In addition to all this, the subscriber, even at $5 a year, does not pay even the cost of the paper and the printing of the 52 copies that he gets. While we are enjoying a fair increase in advertising volume this year, it still does not put us anywhere near our volume of a few years ago. The oil industry has suffered a decrease in volume of only a comparatively few per cent while we as publishers, have suffered a decrease of many times that.

We are getting out a better paper now than we ever did in the quarter of a century that NATIONAL PETROLEUM NEWS has been published. We cover more news, cover it faster because of its greater importance to the reader and we appreciate your recognizing that fact by renewing at the $5 rate.

W. C. Platt, President

* * *

Selling Below Cost

Dear Editor:

Attached is a copy of a letter sent to President Roosevelt regarding price conditions in this area.

A. B. Mickelson

Hon. Franklin D. Roosevelt,
White House,
Washington, D. C.

Dear Sir:

No doubt you meant the new deal for the good of all. However, in our line of business the NRA Petroleum Code has increased our cost of operation, and the retail prices on petroleum products in this territory are completely demoralized, which makes it impossible for us to operate at a profit, and in most cases we cannot get our cost back, so that it is impossible for independent oil jobbers to operate on the present basis, and if allowed to continue every independent oil jobber in the country will be forced out of business, as no one is able to operate at a loss very long.

The tank-wagon price on third grade gasoline all over this territory is 12½c per gallon. Our price here at Willmar, Minn., in the city is 14c per gallon for third grade and 15c for regular gasoline. If we sell this gasoline to a dealer we must give him 3c off on the Third grade and 4c on the regular, which will make a net price to us of 11c per gallon delivered at the dealer's place of business.

This is utterly impossible as the lowest price on third grade at the refinery at the present time is 3½c and regular 4¾c, which will make our laid-in prices 10.31c for third grade and 11.56c for regular, and it costs us 2.78c per gallon to handle gasoline, so that you can readily see that it is impossible to operate under these conditions.

Our cost of operating we sent to the Administrative Board at Washington, and we believe it costs about the same for most of the jobbers to handle petroleum products. Therefore, our actual cost on third grade would be 13.09c and regular 14.34c, and should not be sold under these figures if we were to break even let alone any profit.

It seems that the biggest interest that the majors have at the present time in this business is to get tickets on price cuts in order to get the price down, which would indicate that they are anxious to eliminate the independent oil jobbers, and when we say independent oil jobbers we don't mean the "chislers" as we have no time for them, and if there was some way to eliminate them altogether the oil industry as a whole would be a lot better off. When we mention "independent jobbers" we mean legitimate jobbers throughout the country, and among them you will find the majority to be pretty much on the square. One chisler can do more damage than all the rest of the industry put together.

However, we can't help but feel that the majors are trying to eliminate the independents all the way through, and we believe we have a right to make a living in this country of ours and that it should not be monopolized by a few large majors. Nor do we think that you will let such a thing happen. We have faith in our President and we believe you will see us through this disastrous situation. It seems to us that we already have the machinery there assuring us of at least getting our cost back with possibly a little addition or change in the code, and we would like to make the following suggestion.

For example: If some reliable paper such as the Chicago Journal of Commerce was used as a basis for refinery price to all, we could use the low of the Journal, which at the present time on third grade is 3½c plus Federal Tax of 1c, Minnesota State Tax of 3c, Inspection Fees 0.04; Freight Group 3 to Willmar 2.77c, total 10.31 plus handling cost of 3c, would be a grand total cost of 13.31c. If this was incorporated in the code and enforced, it seems that that would eliminate present conditions in this territory for everyone, and also everywhere else. It would be a simple matter to incorporate this in the code, which of course would make a different laid-in cost in practically every town in the state, and would eliminate selling under cost.

If a jobber or major operator in any part of the country was selling below cost and would be forced to show his figures as stated above, it would be a very simple matter to check and get him back in line by enforcing the code.

Trusting you will see fit to take immediate action, we are

Yours very truly
THE BARTLES-SCOTT OIL CO.
A. B. Mickelson Manager

Beaver Tails and Knee Action Make Old Service Jacks Obsolete

THE doors of the Grand Central Palace had scarcely closed on the last New York Auto Show before experimental engineering staffs set to work to redesign service jacks which could be used easily and speedily under the new 1934 automobiles.

Prior to the New York Show "knee-action" wheels had been hinted at, but actual designs and specifications were jealously guarded. The general trend towards a lower chassis had been known, but few would have prophesied that one of the best selling cars would come through with a differential housing, which, with both tires deflated, would be less than 4 inches from the ground.

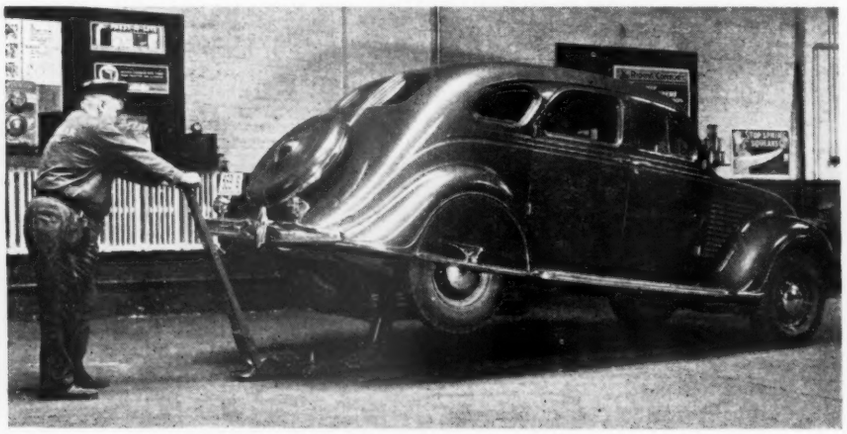
That was not the only major change which challanged the jack manufacturers and the service man who uses the jack. The long "beaver tails" so prevalent with streamlined cars has rendered last year's jack almost useless in servicing the new models. These rear "beaver tails" had been increasing in length each year but considerable imagination was required to visualize a rear bumper 5 feet behind the rear axle.

With a pronounced trend toward lower front end design, demanding lower and lower jack lifting cap heights, little did anyone expect that the 1934 Chevrolet and Pontiac, for instance, would require a higher front end lift than any passenger car in automobile history.

Limiting factors in chassis design were encountered by jack manufacturers in developing new jack designs were; in length, the distance from the rear axle to the rear bumper and rear wheels, and in height, the height of the front bumper and splash apron from the ground with front tires deflated, and chassis height at the point where the front or rear tire would pass over the jack in dollying. These limits indicated a chassis 20% longer and 20% lower at the highest point on the frame.

Lifting range was governed by two extremes: first, the lifting cap must start low enough to go under the desired lifting point both front and rear with tires deflated; second, it must raise high enough not only to clear front or rear tires well off the ground, but to permit the jack chassis to swing under any wheel without contact with the tire.

On some of the new cars the splash apron is so low that it strikes the lifting arm of the jack before the lifting cap has raised high enough to contact the load. Special designs have had to be developed to meet this situation.



Showing why a long, low jack chassis is needed for the 1934 model cars. Due to the advantage of the long jack chassis, the mechanic is able to take a full stroke of the handle without interference with the rear bumper. The broad lifting cap supports the differential housing safely and securely. Photograph courtesy of Walker Manufacturing Co.

No Price Guarantee in Heating Oil Contracts in Mid-Continent

TULSA, Aug. 31

HEATING oil contracts between a majority of Mid-Continent refiners and middle western jobbers will contain no price guarantees for the 1934-1935 season.

The contracts will be based on "market date of shipment," and most of them will call for the average price as shown in one or more price reporting mediums. There will be no minimum or maximum prices.

Many of the contracts with regular customers already have been written and in a few instances shipments are now being made for storage purposes. It is generally believed, however, that not until sometime in September will there be much effort on the part of buyers to make contracts. Since the majority of contracts offered contain no guarantees and are based on the market date of shipment, buyers apparently feel they can just as well look around a little longer.

Refiners in Oklahoma, Kansas and Louisiana-Arkansas have made but little effort to secure contracts. Most of them are convinced there will be more demand this winter than there will be offerings of the better grades of heating oils. Consequently, they are devoting their efforts toward contract negotiations mostly with their regular customers. In some instances refiners already are anticipating they will have to be in the open market themselves to supply their commitments to regular accounts.

It is generally believed there will be a real scarcity of the No. 3 and No. 4 heating oils, particularly for domestic use. Already there are reports that little of the oil is available for open market shipment. One company is reported to have been looking for a quantity to place under contract but has had little success.

When those grades become extremely scarce the buyers of course will drop back to the No. 1 and the No. 2 oils and it is anticipated in most quarters there will be a freer offering of those grades. The offerings will not come from the older Mid-Continent refining districts, however, but are expected to be available in East Texas.

How much of this oil will be offered of course is problematical as far as East Texas is concerned. There have been some sizeable purchases for movement coastwise to the eastern seaboard for storage and it is possible eastern buyers will look to East Texas throughout the winter for sizeable quantities.

But as far as a majority of Mid-Continent refiners are concerned at present, they are giving the heating oils only passing interest because of their belief they will not have enough anyway to supply their regular customers unless some drastically unforeseen situation arises which would curtail greatly consumer consumption.

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The Gulf Refining Company recognizes the fact that sound business is built upon *service* as well as *quality.*

As far back as 1914 a Gulf Service Salesman gave a motorist the first road map in history.

Today Gulf again pioneers in the same field with the new Gulf Info-Map.

This patented, accordian fold Info-Map does not blow in the motorist's face . . . it opens to the route he is travelling with the least inconvenience . . . and in addition it shows him places of interest along his route . . . with mileage tables between the large cities for his *convenience* . . . and local state traffic laws for his *safety.*

FREE!—New "One Arm Map"

Brand new idea in road maps! It folds like an accordian. Won't blow in the wind. Shows state traffic laws . . . "places to go" . . . mileage . . . Exclusive . . . Handle it with one hand while driving. Free at all Gulf stations.

A complete map of travel information.

The new Gulf Info-Map is exclusive with Gulf.

Have you seen the new Gulf Info-Map?

GULF REFINING COMPANY

Transactions in Oil Stocks on New York Stock Exchange

1933 High	1933 Low	1934 High	1934 Low	Listed Shares	Par Value	Company	Div. Rate Period	Last Div. Paid	Transactions Week Ended Sept. 1 Sales Shares	High	Low	Last	Week's Change
47⅝	18½	55⅝	41½	922,070	N.P.	Amerada Corp.	50cQ	Apr. 30, 34	900	48¼	46	47	— ½
35½	6¾	40½	29½	2,290,412	$25	Associated Oil Co.	50c	Mar. 30, 34	320	36	35¾	36	— ¾
32½	12⅜	35¼	21½	2,696,652	25	Atlantic Refining Co.	25cQ	June 15, 34	5,500	26	24⅞	25⅛	— ⅞
11	3	10	6	2,258,779	5	Barnsdall Corp.	....	May 11, 31	5,900	7	6⅝	6¾	— ¼
12	5¼	9¾	5	1,444,970	N.P.	Colonial Beacon Oil Co.	....		100	5	†5	5	— 1¼
15¾	5	14¼	7¼	14,218,835	N.P.	Consolidated Oil Corp.	....	April 7, 34	11,500	9½	8⅜	8¾	— ⅝
108	95½	112	108	132,771	$100	do pfd.	$2Q	Aug. 15, 34	.....	.....	.....	.....	.....
19⅜	4⅛	22¾	15¾	4,722,652	5	Continental Oil Co.	25c	Apr. 30, 34	12,800	18¾	17½	18⅛	— ⅜
27	4⅜	23½	12	413,333	$10	General Asphalt Co.	....	June 15, 32	5,600	18½	17	17½	— ⅜
38	8¼	29¾	12½	95,841	100	Houston Oil Co.	....		600	18	16½	16¾	— 1¾
7⅜	1⅞	5⅜	2½	678,234	25	do v.t.c.	....	Feb. 1, 32	500	3⅜	3¼	3¼	— ⅛
4½	1¼	4⅝	2⅜	1,207,132	10	Indian Refining Co.	....	Dec. 15, 20	200	2¾	2¾	2¾	0
4	⅝	3⅜	1¼	1,309,060	N.P.	Louisiana Oil Ref'g. Corp.	....		300	1½	1¼	1¼	0
29	3½	23½	7¼	40,000	$100	do pfd.	....	May 16, 32	10	10¼	10¼	10¼	— 1¼
4	½	3¼	1⅜	330,000	N.P.	Maracaibo Oil Exploration Co.	....		.....	.....	.....	.....	.....
72	55	63½	50	449,083	$100	Mexican Petroleum Co.	....	Apr. 20, 31	.....	.....	.....	.....	.....
16	3¾	14¾	9½	1,857,912	N.P.	Mid-Continent Pet. Corp.	25c	May 15, 31	3,000	12¾	11¾	12	— ½
17⅜	4¾	15⅞	8½	6,648,052	N.P.	Ohio Oil Co.	15c	June 15, 34	2,800	10¾	10¼	10⅝	— ½
14	8	11½	10¾	4,699,885	$5	Pan Amer. Pet. & Transp. Co.	....	Mar. 15, 33	.....	.....	.....	.....	.....
4¼	⅝	2½	⅝	199,370	N.P.	Panhandle Prod. & Ref'g. Co.	....		.....	.....	.....	.....	.....
20	5¾	21½	8¼	17,994	$100	do pfd.	....	July 2, 23	70	10½	10	10	0
15	4½	14¼	8¼	2,153,444	5	Petroleum Corp. of America	50c	May 14, 34	1,500	10¼	10⅛	10¼	— ¼
18¾	4¾	20¾	14½	4,439,450	N.P.	Phillips Petroleum Co.	25c	May 14, 34	6,600	17	16	16⅛	— ⅝
1⅝	⅛	1⅛	½	1,184,817	$25	Pierce Oil Corp.	....		500	⅝	⅝	⅝	0
13¼	3⅛	10¾	5	150,000	100	do pfd.	....	Feb. 1, 22	.....	.....	.....	.....	.....
2¾	⅛	2	1	2,500,000	N.P.	Pierce Petroleum Corp.	....	Feb. 16, 31	1,900	1¼	1⅛	1⅛	0
17⅜	6¾	16⅜	8	1,050,000	$5	Plymouth Oil	25cQ	Mar. 31, 34	4,600	9⅞	9¼	9½	— ½
15⅝	2½	14⅞	7¼	3,038,370	N.P.	Pure Oil Co.	....	Sept. 1, 30	3,900	8½	7¾	7¾	— ¾
69¼	30	80	58¾	130,000	$100	do 8% pfd.	....	Apr. 1, 33	220	63½	61	61	— 1½
39¾	17⅜	39⅛	32¼	425,342	$14.00	Royal Dutch Co. (N. Y. shares)	$1.35	July 31, 34	400	35⅝	34½	35⅜	+ ⅝
43⅛	15	38⅛	23¾	1,244,383	N.P.	Seaboard Oil Co. of Del.	15cQ 10c Ex.	June 15, 34	1,700	28⅛	26	26¼	— 2
31	11¼	26½	21	56,148	£2	Shell Transport & Trading Co.	75c	July 23, 34	.....	.....	.....	.....	.....
11⅜	4	11½	6½	13,070,625	N.P.	Shell Union Oil Corp.	....	June 30, 30	4,900	7⅜	6¾	6⅞	— ½
61	28½	89	57	400,000	$100	do pfd. w.w.	$1.37½	July 1, 31	200	61¾	61	61¾	— ¾
12⅜	4⅛	11¼	7¼	461,000	10	Simms Petroleum Co.	30c	Aug. 1, 34	500	9¼	8¾	8¾	— ½
9½	3	11½	6¾	1,100,069	25	Skelly Oil Co.	50c	Dec. 15, 30	100	7½	7½	7½	0
57½	22	68⅛	54	120,000	100	do pfd.	$1.50	May 1, 31	.....	.....	.....	.....	.....
17	6	19⅞	12⅛	31,701,348	25	Socony Vacuum Oil Co.	15c	June 15, 34	15,500	15⅛	14¼	14½	— ⅜
102¾	92½	110¼	96½	764,925	100	S. O. Export Corp. pfd.	$2.50S.A.	June 30, 33	200	109½	109½	109½	+ ⅝
45	19⅛	42⅞	30⅝	13,102,900	N.P.	S. O. California	25cQ	June 15, 34	8,600	35¼	34¼	34¼	— 1⅛
39⅞	12⅝	41	33¾	320,000	$10	S. O. Kansas	50c	Apr. 30, 34	.....	.....	.....	.....	.....
47½	22¾	50⅜	40⅝	25,740,965	25	S. O. New Jersey	50cS.A.	June 15, 34	3,200	27¼	26¾	26¾	— ½
59	35	67	51½	1,590,406	N.P.	Sun Oil Co.	25cQ	Sept. 1, 34	1,100	*67	65½	67	+ 1½
103	89	117	100	100,000	$100	do pfd.	$1.50Q	Sept. 1, 34	120	116¼	115¾	115¾	— ½
4½	⅝	3	1¼	912,479	N.P.	Superior Oil Co.	**2½%	June 20, 34	3,400	1⅞	1¾	1⅞	+ ⅛
30⅛	10¾	29⅜	20	9,851,236	$25	The Texas Corp.	25cQ	July 2, 34	8,700	24½	22⅜	23¾	— ¾
6½	1⅜	6½	2½	930,570	10	Texas Pacific Coal & Oil Co.	....	Dec. 31, 29	1,200	3⅛	3	3	— ⅛
11¾	3⅛	14⅜	8½	5,998,914	N.P.	Tide Water Associated Oil Co.	50c	Apr. 1, 34	5,700	11	10	10	— ⅞
65¾	23½	85⅛	64½	695,503	$100	do pfd. C. T. V.	$2.00	June 30, 34	500	83¼	82½	83¼	+ ¾
26	9¾	40	31	2,191,823	N.P.	Tide Water Oil Co.	25c	Dec. 23, 33	.....	.....	.....	.....	.....
80	45	96½	80	199,446	$100	do pfd.	$1.25Q	Nov. 15, 33	200	95	95	95	0
23⅜	8½	20½	13¾	4,386,070	25	Union Oil of California	25cQ	Aug. 10, 34	2,900	16	15½	15½	— ¾
22¾	10½	21¼	15⅝	1,200,000	N.P.	Union Tank Car Co.	30cQ	Sept. 1, 34	300	19⅜	19	19⅜	0
4⅞	⅝	3⅞	1⅝	759,538	N.P.	Warner Quinlan Co.	....	July 3, 30	100	1⅝	1⅝	1⅝	— ⅛
5½	2	5¼	2½	431,443	$5	H. F. Wilcox Oil & Gas Co.	....	May 10, 28	2,000	4⅛	3½	4	0

*New high. †New low. x Ex-div. **On accum. pfd.

Standard Oil Stocks on New York Curb Market

1933 High	1933 Low	1934 High	1934 Low	Shares Issued	Par Value	Company	Div. Rate Period	Last Div. Paid	Transactions Week Ended Sept. 1 Sales Shares	High	Low	Last	Week's Change
13	6	11	6	40,000	$25	Borne Scrymser Co.	....	Oct. 15, 30	.....	.....	.....	.....	.....
39¾	25	38	26	200,000	50	Buckeye Pipe Line Co.	75cQ	June 15, 34	50	31	31	31	— 1¼
129	71	126½	116	120,000	25	Chesebrough Mfg. Co.	$1.50Q	June 29, 34	50	123	123	123	+ ½
12	2¼	14⅜	9⅜	5,977,873	N.P.	Creole Petroleum Co.	.....	.....	6,200	13⅞	13	13⅜	— ⅝
41¾	20	37	30	50,000	$100	Eureka Pipe Line Co.	$10	Aug. 1, 34	.....	.....	.....	.....	.....
105½	40	46⅛	33¼	9,000,000	N.P.	Humble Oil & Refg. Co.	25cQ	July 1, 34	2,900	43½	41¾	41¾	— 1½
15⅞	6½	15½	12⅝	26,742,792	N.P.	Imperial Oil Corp. coup.	25cQ	June 1, 34	5,400	15⅜	15	15	— ½
15¾	6½	15⅝	13	-.....	N.P.	do registered	25cQ	June 1, 34	200	15⅛	15	15	— ⅜
8	3⅛	6⅞	3¾	300,000	$10	Indiana Pipe Line Co.	††15c S.A.	May 15, 34	500	4	†3¾	3¾	— ¼
23½	8⅞	30⅝	19⅝	14,247,088	N.P.	International Pet. Co.	††56cQ	June 1, 34	4,100	29¾	28¾	29⅛	— ⅝
10	5½	9½	7⅝	513,000	$12.50	National Transit Co.	15c	April 14, 34	200	8⅜	8	8	+ ¼
4⅞	3	4¾	3	100,000	5	New York Transit Co.	15c S.A.	April 14, 34	.....	.....	.....	.....	.....
6½	4¼	7	4⅝	120,000	10	Northern Pipe Line Co.	25c S.A.	July 2, 34	.....	.....	.....	.....	.....
87	70¾	88	83½	580,796	100	Ohio Oil Co. pfd.	$1.50Q	June 15, 34	.....	.....	.....	.....	.....
4	1¼	6	3¼	400,000	25	Penn Mex. Fuel Co.	75c	Dec. 22, 33	.....	.....	.....	.....	.....
6	2¾	5½	3¾	100,000	10	Southern Pipe Line Co.	15c	Sept. 1, 34	100	3¾	†3¾	3¾	— ¼
22½	11	26½	17½	1,200,000	25	South Penn Oil Co.	30c	June 30, 34	600	23	22¼	22½	— 1½
43	24½	47	41	35,000	50	South West Pa. Pipe Lines	$1Q	July 2, 34	.....	.....	.....	.....	.....
34	17	32¾	25	15,941,894	25	S. O. Indiana	25cQ	June 15, 34	14,300	27¼	26⅞	27	— ¼
19¼	8⅛	17⅞	14⅝	2,606,983	10	S. O. Kentucky	25cQ	June 15, 34	1,900	16¼	15⅝	15⅝	— ⅜
20½	11	16⅓	9	190,822	25	S. O. Nebraska	25cQ	June 20, 34	200	9¼	9¼	9¼	0
41	15½	28½	15	752,465	25	S. O. Ohio	....	April 16, 34	350	16	15¾	16	0
88	60	95	77½	120,000	100	do 5% pfd.	$1.25Q	July 16, 34	.....	.....	.....	.....	.....
3	1	4½	2¾	34,158	25	Swan Finch Oil Corp.	....	Dec. 1, 30	.....	.....	.....	.....	.....

*New high †New low. Indiana Pipe Line 10c; International Pet. Co. 44c, June 1, '34.
x Ex dividend.

Kentucky Publishes Tax Booklet

LOUISVILLE—A booklet containing the rules and regulations of the gross receipts tax law of 1934 has been published by the State Tax Commission, Frankfort, Ky., according to *The Kentucky Petroleum Marketer*, official organ of the Kentucky Petroleum Marketers Association.

The booklet contains information on the application of the sales tax, definitions, exemptions, licensing, methods of reporting and paying the tax, and so on. Copies may be obtained from State Tax Commission at Frankfort.

Open New Service Station

CHICAGO, Aug. 31.—John D. Reynolds and George L. Ratto, formerly with the Lake Petroleum Co., Chicago, have opened a trackside service station at 2030 Archer avenue, Chicago.

Oil and Royalty Stocks on New York Curb

1933 High	1933 Low	1934 High	1934 Low	Par Value	Company	Transactions Week Ended Sept. 1 Sales Shares	High	Low	Last	Week's Change
2⅜	⅛	1¼	⅛	N.P.	American Maracaibo...	300	⅝	⅝	⅝	0
5½	1½	2⅞	1⅜	N.P.	Arkansas Nat. Gas....	100	1⅜	1⅜	1⅜	0
4	1	2⅜	1	N.P.	do A.....	1,800	1⅛	1	1	— ⅛
4⅞	2	3⅞	1¾	$10	do pfd.....	.....	....	....	....	....
15¼	6½	15¾	12¾	N.P.	British Amer. Oil coup.	.....	....	....	....	....
7¾	¼	5½	2¾	$1¼	Carib Syndicate.....	5,400	3⅞	3⅜	3½	— ⅜
6¼	1⅛	4¼	1⅜	N.P.	Cities Service.....	31,400	2⅛	1⅞	2	0
30	10½	26⅞	11¼	$100	do pfd.....	800	17⅝	17¼	17⅜	— ¼
3¾	1	2½	1⅜	10	do pfd. B.....	.....	....	....	....	....
25	5	23½	9	100	do pfd. BB.....	60	17	15	17	— 1
4	¼	3¾	1¼	N.P.	Colon Oil Corp.....	300	1⅜	1⅜	1⅜	— ⅛
2⅛	⅜	1¾	⅝	N.P.	Columbia Oil & Gas vtc.	1,700	⅞	⅝	⅝	— ⅛
2⅞	1	2	1½	$1	Consolidated Royalty..	.....	....	....	....	....
3⅛	1¾	3⅛	1⅝	N.P.	Cosden Oil.....	300	1¾	1½	1½	0
6½	6	9	5	$100	do pfd.....	.....	....	....	....	....
1½	⅜	1¼	¾	N.P.	Crown Central Pet.....	1,100	⅞	¾	⅞	+ ⅛
8	2½	7½	4⅝	N.P.	Darby Petroleum.....	600	5½	5¼	5½	+ ¼
2¾	⅞	2¼	1	N.P.	Derby Oil & Refg.....	500	1¾	†1	1	— ¼
27	25	.....	....	N.P.	do pfd.....	.....	....	....	....	....
62	24	76¾	50	$25	Gulf Oil Corp.....	600	57½	56¼	56¾	— 1¼
7	1¼	4⅜	1¼	N.P.	Indian Ter. Illg. Oil A	100	1¾	†1¼	1¼	— ¼
6½	1¼	4¼	1¾	N.P.	do B.....	.....	....	....	....	....
2	⅝	3	1⅛	N.P.	Kirby Petroleum.....	3,200	2½	2	2⅜	+ ¼
1½	⅛	⅞	⅛	$25	Leonard Oil Dev.....	600	⅛	⅜	⅛	+ ⅛
9½	1¼	5⅞	3½	N.P.	Lion Oil Refg.....	.....	....	....	....	....
12⅞	4⅜	8⅝	4¼	N.P.	Lone Star Gas.....	1,500	5¼	5	5	— ⅜
7	4	8¾	6¾	N.P.	Margay Oil Co.....	.....	....	....	....	....
5	1½	2¼	1	N.P.	Mexico-Ohio Oil.....	.....	....	....	....	....
6½	1	5	2⅞	N.P.	Michigan Gas & Oil...	300	3¼	3	3	+ ⅛
4	1¼	2⅞	1⅝	N.P.	Mid. States Pet. A vtc	300	1⅞	1⅞	1⅞	— ⅛
1⅜	¼	1½	½	N.P.	do B vtc.....	300	⅝	⅝	⅝	0
1¼	¼	¾	⅛	$1	Mountain & Gulf.....	.....	....	....	....	....
6½	2½	5½	4	10	Mountain Producers..	300	4⅜	4⅝	4⅜	+ ⅛
20	10	18½	13½	N.P.	National Fuel Gas....	500	15⅛	14¾	15	+ ⅞
2⅛	½	2½	1¾	$5	New Bradford Oil.....	500	2⅛	2	2	— ⅛
5	½	3⅜	1¾	N.P.	North Central Texas	500	2¼	2	2	— 1
½	⅛	⅛	⅛	N.P.	North European.....	500	⅛	⅛	⅛	0
8⅜	3	10⅜	8¼	N.P.	Oil Stocks Ltd. A.....	100	9⅞	9⅞	9⅞	— ⅛
3¾	⅛	2⅜	⅞	N.P.	Pantepec of Venezuela	5,100	2⅛	1¾	1¾	— ⅜
1¾	¼	⅝	⅛	N.P.	Producers Royalty....	500	¼	¼	¼	0
57	21	63	36½	$100	Pure Oil 6% pfd.....	120	44	41¾	41¾	— 1½
2½	½	1½	¾	N.P.	Red Bank Oil.....	.....	....	....	....	....
1⅞	¼	1	¼	N.P.	Reiter-Foster Oil.....	100	¼	¼	¼	0
2¼	¼	4	⅝	$25	Richfield Oil pfd.....	300	⅞	¾	¾	0
...	....	1¼	¾		Root Refining.....	.....	....	....	....	....
8	3	8¼	6½	10	do conv. pr. pfd.....	.....	....	....	....	....
...	....	....	....	$10	Royalty Corp. pfd.....	.....	....	....	....	....
4⅜	⅜	3⅜	⅞	N.P.	Ryan Consolidated....	.....	....	....	....	....
1	⅜	⅞	⅛	$10	Salt Creek Consolidated	300	¾	¾	¾	0
9¼	3½	7⅞	5½	10	Salt Creek Prod.....	800	6⅛	5¾	6	0
6⅜	3¼	6	4⅞	N.P.	Southland Royalty....	200	5¼	5⅛	5¼	+ ¼
1½	¼	2	⅛	$5	Sunray Oil.....	2,800	1¾	1¼	1¼	— ⅛
13	6¼	11	4⅜	N.P.	Texon Oil & Land.....	3,700	7⅛	5¼	6½	+ 1¼
1⅜	⅛	1⅜	½	$5	Venezuela Petroleum..	400	9/16	9/16	9/16	— 1/16
3¾	1½	5¼	3½	1	Woodley Petroleum...	.....	....	....	....	....

•New high. †New low.

New York Bonds

Week Ended Sept. 1

	High	Low	Last	Change
Atlantic Refg. deb. 5s...	107¼	107	107	— ⅜
Calif. Pet. 5s.....	102	102	102	0
Calif. Pet. 5½s.....	102	101⅝	102	+ ½
General Pet. 5s '40.....	105½	105	105	0
Humble Oil & Refg. 5s...	102½	102¼	102¼	— ⅛
Phillips Pet. 5½s '39....	101⅝	101⅜	101⅜	— ¼
Pure Oil 5½s '37.....	100⅝	100¼	100⅝	+ ⅜
Pure Oil 5½s '40.....	99¼	99	99⅛	+ ⅛
Richfield Oil of Calif. 6s '44	29¾	29	29½	— ½
Richfield Oil of Calif. 6s ctfs.....	29¾	29	29	— ⅜
Shell Union Oil 5s '47...	100	99½	100	+ ½
Shell Union Oil 5s w.w...	99⅞	99½	99¾	+ ¼
Sinclair Con. Oil 7s A...	103¾	103½	103½	0
Sinclair Con. Oil 6½s B..	104	103⅝	103¾	0
Skelly Oil 5½s '39.....	96⅛	95⅝	95¾	+ ¼
S. O. N. J. 5s '46.....	106⅜	105⅞	106⅜	+ ⅜
S. O. N. Y. 4½s '51.....	104	103½	103¾	+ ¼
Union Oil of Calif. 5s '45 w.w.....	103	102½	102½	— ½
Union Oil of Calif. 6s A..	115	114⅝	114⅝	— ⅛
Warner-Quinlan 6s '39...	32	30	30	—2

New York Curb Bonds

Week Ending Sept. 1

	High	Low	Last	Change
Cities Serv. 5s '66.....	43⅛	42⅛	42⅛	— ⅞
Cities Serv. 5s '50.....	44⅜	42⅛	43	—1⅛
Cities Serv. G. 5½s '42..	64½	63	63	—1
Cont. Oil 5¼s '37.....	102⅜	102⅛	102⅜	+ ¾
Empire O & R 5½s '42..	62	60¼	61¼	+ ¼
Gulf Oil 5s '37.....	105	105	105	0
Gulf Oil 5s '47.....	105½	105	105½	+ ¼
Sun Oil 5½s '39.....	101¼	101	101	0
Sun Pipe Line 5s '40....	101⅞	101¾	101¾	0

Pittsburgh Stock Exchange

Transactions Week Ended Aug. 31, 1934

	Sales	High	Low	Last	Change Over Week
Col. Gas & Elec...	551	10⅜	9¼	9½	— ½
Devonian Oil....	145	10½	10½	10½	+ ¼
Lone Star Gas....	1,012	5¼	5	5⅛	— ⅛
Pgh. Oil & Gas...	100	1⅝	1⅜	1⅜	0
Plymouth Oil....	100	9½	9½	9½	— ⅜
†Socony-Vacuum.	50	15	14⅝	14⅝	— ⅜
†Standard Oil of N. J.....	151	44⅜	44⅜	44⅜	— ⅝
West. Pub. Serv..†	524	4¼	4⅛	4⅛	— ⅜

†Unlisted.

Over Three Million View Standard's Exhibit

CHICAGO — Over three million people saw the Standard Oil of Indiana's Worlds Fair exhibit during the first 67 days, according to company officials.

Of this number, approximately 865,000 attended the performance of Allen King and his animals in the show cage. The remainder had visited the animals' quarters in the building adjoining the amphitheatre.

Added interest to the exhibit has come through the birth of six lion cubs. This brought the total of animals on display to 49.

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California Agency Posts Buying Prices on Fuel and Gas Oils

LOS ANGELES, Aug. 31

PRICES on fuel oil, gas oil and kerosine distillate were posted by the Pacific Coast Petroleum Agency on Aug. 27, in accordance with Sec. 11 of the refiners' agreement. Refiners signatory to the agreement were notified that, when and as offered to it in writing, the Agency would purchase these products from them on the following specifications and price schedule.

Light Fuel Oil

Specifications:

Minimum gravity—16.5° A. P. I.
Viscosity Furol—100 seconds @ 122° F. max.
Flash P. M. CC—150° F. min.
B. S. & W.—1 per cent max.
Pour test—70° F max.
Sulfur—1.5 per cent max.

Prices:

$0.63 per barrel, f.o.b., Los Angeles Basin refineries.

$0.57 per barrel, f.o.b., San Joaquin Valley and Coastal district refineries.

Heavy Fuel Oil

Specifications:

Viscosity Furol—175 seconds @ 122° F. max.
Flash—150° F. min.
B. S. & W.—2 per cent max.
Pour test—95° F. max.
Sulfur—1.5 per cent max.

Prices:

$0.58 per bbl., f.o.b., Los Angeles Basin refineries.

$0.53 per bbl., f.o.b., San Joaquin Valley and Coastal district refineries.

High Sulfur Fuel Oil

Specifications:

Viscosity Furol—175 seconds @ 122° F. max.
Flash—150° F. min.
B. S. & W.—2 per cent max.
Pour test—95° F. max.
Sulfur—over 1.5 per cent.

Prices:

$0.53 per bbl., f.o.b., Los Angeles Basin refineries.

$0.48 per bbl., f.o.b., San Joaquin Valley and Coastal district refineries.

NOTE: Deduction will be made of 2 cents per barrel for each 0.1 per cent or fraction thereof for sulfur in excess of the figure established in the above specifications.

Straight Run Gas Oil

Specifications:

Gravity—30 to 35.9 A. P. I.
Flash P. M. CC—150° F. min.
B. S. & W.—0.1 per cent max.
Carbon residue—0.25 per cent max.
Sulfur—0.75 per cent max.
Final Boiling Point—725° F. max.
Color—visible red through neck of 4 oz. bottle.
Cracked distillate content—None.

Prices:

$1.00 per bbl., f.o.b., Los Angeles Basin refineries.

$0.90 per bbl., f.o.b., San Joaquin Valley and Coastal district refineries.

Kerosine Distillate

Specifications:

Gravity—36° A. P. I.
Flash, Tag. CC—115° F. min.
Color—No. 3, N. P. A. max.
Initial Boiling Point—370° F. max.
Final Boiling Point—580° F. max.
Sulfur—0.25 per cent.

Prices:

$1.20 per bbl., f.o.b. refineries.

Refiners were notified that these prices were subject to change without notice and that fuel oil would be purchased under the above specifications only when contracted to the Agency for a period of six months with the option of an additional 6 months.

NEW PATENTS

July 31, 1934

MISCELLANEOUS

Process and product relating to tertiary ethers—Theodore Evans, Oakland, and Karl R. Edlund, assignors to Shell Development Co. Filed Dec. 28, 1931. No. 1,968,033.

Liquid petroleum gas distributing system—James B. Green, Sarasota, Fla. Filed Apr. 24, 1933. No. 1,968,141.

Dipped candle—Reuben A. Swenson, Hammond, Ind., assignor to Standard Oil Co. (Ind.). Filed Jan. 11, 1932. No. 1,968,269.

Preparation of olefine derivatives—Karl Edlund, Berkeley, and Theodore Evans, Oakland, Calif., assignors to Shell Development Co. Filed Feb. 14, 1934. No. 1,968,601.

Storage-tank—Clifford A. Ellis, Ridgefield, N. J., assignor to Socony-Vacuum Oil Co. Filed Nov. 11, 1930. No. 1,968,673.

Aug. 7, 1934

REFINING

Treatment of hydrocarbons—William M. Malisoff, Philadelphia, Pa., assignor to Atlantic Refining Co. Filed Nov. 3, 1930. No. 1,968,842.

Treatment of sludge—William M. Malisoff, assignor to Atlantic Refining Co. Filed Aug. 22, 1932. No. 1,968,843.

Refining cracked gasoline—Kenneth J. Smith, El Dorado, Kans., assignor to Skelly Oil Co. Filed Jan. 10, 1930. No. 1,969,047.

Removal of wax from hydrocarbon oils—George R. Bryant, Lawrenceville, Ill., and Francis X. Govers, Vincennes, Ind., assignors to Indian Refining Co. Filed March 17, 1932. No. 1,969,201.

Natural gasoline recovery—Howard S. Cole, Jr., Pasadena, and Edwin R. Cox, Los Angeles, Calif., assignors to Texas Co. Filed Sept. 30, 1930. No. 1,969,207.

Treatment of hydrocarbon oils—Gustav Egloff and Jacque C. Morrell, Chicago, Ill., assignors to Universal Oil Products Co. Filed Sept. 16, 1933. No. 1,969,302.

Treatment of hydrocarbon oils—Jacque C. Morrell, assignor to Universal Oil Products Co. Filed Dec. 19, 1931. No. 1,969,316.

Treatment of mineral oils by heat—Walter J. Perelis, Boston, Mass., assignor to Universal Oil Products Co. Filed March 20, 1925. No. 1,969,321.

Treatment of mineral oils by heat—Walter J. Perelis, assignor to Universal Oil Products Co. Filed Sept. 23, 1926. No. 1,969,322.

Treatment of coals, tars, mineral oils, and like—Mathias Pier, Germany, assignor to Standard-I. G. Co. Filed Nov. 29, 1930. No. 1,969,422.

Process for treating hydrocarbon oils—Walter M. Cross, Kansas City, Mo., assignor to Gasoline Products Co. Filed Sept. 1, 1926. No. 1,969,502.

Removal of wax from hydrocarbon oil—Bernard Y. McCarty, Beacon, N. Y., and William E. Skelton, Cambridge, Mass., assignors to Texas Co. Filed Nov. 30, 1931. No. 1,969,670.

Process of refining oils—Frank W. Hall, Port Arthur, Tex., assignor to Texas Co. Filed Sept. 24, 1930. No. 1,969,694.

MISCELLANEOUS

Process for producing activated carbon—Jacque C. Morrell. Filed Dec. 4, 1930. No. 1,968,845.

Process for making structural adsorbtive carbon and product—Jacque C. Morrell. Filed Jan. 28, 1933. No. 1,968,846.

Structural adsorbtive carbon and process of making—Jacque C. Morrell. Filed Jan. 28, 1933. No. 1,968,847.

Process of treating containers for reception of transformer oil—Arthur E. Pew, Jr., Bryn Mawr, and Harry F. Angstadt, Philadelphia, Pa., assignors to Sun Oil Co. Filed Jan. 6, 1930. No. 1,969,235.

Gasoline—Gellert Alleman, Wallingford, Pa., assignor to Sun Oil Co. Filed Oct. 9, 1933. No. 1,969,249.

Control for hydraulic grease dispensers—Anthony Bizzari, New York, N. Y. Filed May 12, 1933. No. 1,969,254.

Gasoline - dispensing apparatus—Roger J. Daley, Chicago, Ill. Filed Jan. 9, 1933. No. 1,969,360.

August 14, 1934

REFINING

Process of refining petroleum—Sijbren Tijmstra, Madison County, Ill., assignor to Shell Petroleum Corp. Filed July 9, 1927. No. 1,969,956.

Process of refining gasoline with zinc chloride—Franklin E. Kimball, Los Angeles, Calif. Filed Sept. 15, 1933. No. 1,970,143.

Production of valuable hydrocarbons from varieties of coal, tars, mineral oils, and like—Mathias Pier and Ernst Hochschwender, Germany, assignors to Standard-I. G. Co. Filed Sept. 5, 1930. No. 1,970,248.

Interesting TRADE ITEMS

Pipe Thread Protector

A new type of pipe thread protector consisting of a narrow band of lap welded strip steel and a formed coating of vulcanized rubber is to be put on the market by Brown Brothers, Pittsburgh, following exhaustive tests by several pipe companies. It is claimed that the new protector may be depended upon to stay on the ends of the pipe under all conditions until the end of its journey.

* * *

Vehicle Lift Chock

An automatic chock for vehicle lifts operated by the dropping of the ramps as the lift rises from the floor was patented recently. The chock consists of a plate hinged on the same pin as the ramp. It lies flat on the runways when the lift is in the lowered position and raises up through a lever action by the weight of the dropping ramps so as to block the vehicle on the lift.

One of the most revealing claims for the mechanism is the following:

"10. In a vehicle lift, a track, a movable chock associated with said track, a member adapted to lower by gravity when the lift moves upwardly for raising the chock to vehicle blocking position, and means connecting said gravity member with said chock for compounding the raising force imparted to the chock."

The patent (No. 1,966,975) was filed Aug. 18, 1930, and granted July 17, 1934, to Kenneth S. Clapp, Cleveland.

* * *

Tank Truck Metering Unit

The new tank truck metering unit has been designed by the S. F. Bowser & Co., Ft. Wayne, Ind., for installation on fuel oil and range oil delivery trucks, equipped with power take-off. The outfit consists of a 1¼-inch Xacto meter fitted with a 10-inch diameter 100-gallon dial, a combination air release and strainer mounted inside a dust- and water-proof steel cabinet. Its capacity is 25 gallons per minute maximum.

The unit, known as Figure 787, is described in a folder recently issued by the company.

* * *

Tire Valve

A. Schrader's Sons, Inc., has developed a new type of tire valve with a rubber base moulded to the metal stem. The rubber base is cured to the inner tube, thus eliminating all joints around the valve base. Clamping of valves with nuts and washers is thus done away. If no rim nut is used, the valve will readily pull back into the tire in case of a flat so as to prevent damage to the tube and it is claimed that the tube cannot creep. A valve mounting tool is used when inflating the tire without the rim nut. The stem of the valve is standard however so that dust caps and rim nuts may be used if desired.

* * *

Display Stand

A new chromium display stand designed to hold a complete assortment of Sterling Cable Corp. products is ready for distribution, it is announced. Built of chromium tubing, the stand is 7 feet high, 3 1/3 feet wide and 2 feet deep. It is said to be an impressive merchandising aid.

Oil Dividends

Declared and Waiting Payment

Company	Amount	Record	Payable
Atlantic Refining q.	25c	Aug. 21	Sept. 15
Buckeye Pipe Line q.	75c	Aug. 24	Sept. 15
Chesebrough Mfg. Co. com q	$1.00	Sept. 4	Sept. 29
do extra	50c	Sept. 4	Sept. 29
Honolulu Oil Corp., Ltd.	25c	Sept. 5	Sept. 15
Humble Oil & Refining q.	25c	Sept. 1	Oct. 1
McColl Frontenac Oil q.	*20c	Aug. 15	Sept. 15
New Bradford Oil s.a.	10c	Aug. 15	Sept. 15
New York Transit s.a.	15c	Sept. 21	Oct. 15
Ohio Oil irreg.	15c	Aug. 18	Sept. 15
Ohio Oil q. pfd.	$1.50	Sept. 4	Sept. 15
Phillips Petro. Co. (Irreg.)	25c	Aug. 6	Sept. 15
Plymouth Oil Co. q.	25c	Sept. 8	Sept. 29
Seaboard Oil of Del. q.	15c	Sept. 1	Sept. 15
Seaboard Oil of Del. Ext.	10c	Sept. 1	Sept. 15
Socony-Vacuum	15c	Aug. 24	Sept. 15
South Penn Oil Co. q.	30c	Sept. 15	Sept. 29
S. W. Penna. Pipe Line q.	$1.00	Sept. 15	Oct. 1
Standard of Cal. q.	25c	Aug. 15	Sept. 15
Standard of Indiana q.	25c	Aug. 15	Sept. 15
Standard of Kansas q.	50c	Oct. 1	Oct. 31
Stand. of Kentucky q.	25c	Aug. 31	Sept. 15
Stand. of Ohio, pfd. q.	$1.25	Sept. 29	Oct. 15
Sun Oil Co. q.	25c	Aug. 25	Sept. 15
Texas Corp. q.	25c	Sept. 7	Oct. 1
Texon Oil & Land Co. q.	15c	Sept. 10	Sept. 29
Texon Oil & Land Co. ex.	15c	Sept. 10	Sept. 29
Woodley Petro.	10c	Sept. 15	Sept. 30

THE OIL INDUSTRY EXCHANGE

Situations Open

EXPERIENCED OPERATING AND CONSTRUCTION ENGINEER

for service in France, capable of supervising building Atmospheric and Vacuum Distillation Unit and Continuous Treating Plant and of OPERATING these units during test and acceptance runs. OPERATING EXPERIENCE AND ABILITY TO SPEAK FLUENT FRENCH ARE OF FIRST IMPORTANCE AND ABSOLUTELY ESSENTIAL. If qualified, write fully, giving complete details of experience and past employment record, reference, age, salary required, when available, languages spoken other than French and English.

Arthur G. McKee & Co.
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Business Opportunities

GASOLINE DISTRIBUTORS

Local distributors wanted throughout the seven Pacific states, for a popular brand of gasoline. An attractive proposition for those who qualify. Write for information and give details regarding your delivery and storage facilities and territory desired.

Address P. O. Box 662
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NATIONALLY KNOWN MANUFACTURER of oil and gasoline meters is desirous of securing jobbers for their products in New England and Middle Atlantic States. Address Box 131, care National Petroleum News.

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Graphite treated oils are sweeping the country. We furnish everything and set you up in business for yourself. Good profits, steady repeat business. Small investment will start you.

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Telephone Bigelow 3-4020

Oil Code Changes and Interpretations

Text of Order Approved by Administrator Ickes August 28, Authorizing Refinery Allocating Agencies to Require that All Allocation be from Legally Produced Crude.

WHEREAS, Articles III and IV of the Code of Fair Competition for the Petroleum Industry contemplate a balance of crude production with gasoline market demand, and a limitation of refinery gasoline output to market demand; and

WHEREAS, the production of crude oil in excess of quotas established under the Code is an unfair trade practice and in violation of the Code, and the production of gasoline in excess of quotas established under the provisions of the Code is likewise an unfair trade practice and a violation of the Code; and

WHEREAS, it is impossible to determine exactly the amount of crude oil produced in excess of quotas established under the Code, and any gasoline manufactured from oil produced in excess of such quotas will prevent a balance of crude with the market demand for gasoline, and it is therefore essential that in establishing quotas for gasoline that no quota shall be established for gasoline manufactured from crude oil produced in excess of such quotas for the production of crude;

NOW, THEREFORE, BE IT RESOLVED and ordered that the Planning and Co-ordination Committee does hereby direct that all allocations to refineries for the production of gasoline, under the provisions of Article IV of said Code, shall be for the production of gasoline from crude oil or its products lawfully imported into the United States, or withdrawn from storage in compliance with the Code of Fair Competition for the Petroleum Industry and lawful orders made thereunder, or from crude oil or its products produced in accordance with quotas established under the Code and in accordance with valid regulations or orders prescribed by any board, commission, officer or other duly authorized agency of the state where such oil was produced; and each and every allocation made to a refinery for the production of gasoline under the provisions of the Code shall be made upon and subject to the limitations of this resolution.

Text of Order Approved by Administrator Ickes August 28, Authorizing Refinery Allocators to Require Reports of Refinery Operators by 4th and 10th of Each Month.

WHEREAS, Section 8, Article IV of the Code of Fair Competition for the Petroleum Industry provides that the Planning and Co-ordination Committee may make such rules and regulations, authorize such committees and require such reports as it may deem necessary to accomplish the purpose of said Article IV,

NOW, THEREFORE, BE IT RESOLVED: That the District Allocator and/or the District Allocating Agency for each District be, and hereby are, authorized to require a report each month from the operator of each refinery operating in such District. Said report shall be under oath and must be filed with the District Allocator or the Agency on or prior to the 4th day of each month, in order that the information contained therein shall be available for fixing gasoline quotas for the following month. Such report shall contain so much of the following as may be required by the District Allocator and/or said Agency:

(a) A request from the operator for the allocation of a definite quota of gasoline to be manufactured during the succeeding calendar month at each refinery of the operator located in such District.

(b) A statement of the quantity of crude or its products that the operator anticipates he will have available during the succeeding month for use in the manufacture of gasoline and the specific sources from which he expects to secure such crude or its products with a showing as to whether or not all of such crude or its products is available from crude to be produced in compliance with the Code of Fair Competition of the Petroleum Industry and in accordance with valid regulations or orders of the State Regulatory Body having control over the production of crude or will be available from crude or its products lawfully withdrawn from storage in compliance with the provisions of the Code or lawful orders made thereunder or will be available from crude lawfully imported into the United States and if any part of the crude or its products expected to be available will not be available from that lawfully produced or that lawfully withdrawn from storage or that lawfully imported into the United States, then a statement of the quantities not so available, and which the refiner expects to use in the manufacture of gasoline.

AND BE IT FURTHER RESOLVED: That the District Allocator and/or the District Allocating Agency for each District be and hereby are authorized to require a second report each month from the operator of each refinery operating in such District. Said report shall be under oath and must be filed with the District Allocator or said Agency on or prior to the 10th day of each month beginning with the month of October, 1934. Said report must contain so much of the following as may be required by said District Allocator and/or said agency:

(a) A statement whether or not all gasoline manufactured during the preceding month was manufactured from crude oil or its products lawfully imported into the United States, or withdrawn from storage in compliance with the Code of Fair Competition for the Petroleum Industry, and lawful orders made thereunder; or from crude oil or its products produced in accordance with quotas established under the Code, and in accordance wtih valid regulations or orders prescribed by any Board, Commission, officer, or other duly authorized Agency of the State where such oil was produced.

(b) A statement of the number of barrels of crude oil or other products run through each refinery of the operator in the District and produced by refiner during the preceding month.

(c) A statement of the number of barrels run through each refinery of the operator in the District and purchased by refiner during the preceding month.

(d) A description and identification of all leases and ownership of such leases from which crude oil was run to each refinery of operator during preceding month.

(e) A statement giving names and addresses of all brokers or other persons from whom crude oil or products was purchased and the amount of crude or products purchased from each during preceding month.

(f) A statement of the methods of transportation from lease tanks to each refinery of operator during preceding month; also state name, ownership and address of pipe line if any through which such crude oil or its products were transported.

(g) A statement of any other facts or information required by the District Allocator and/or the District Allocating Agency.

(h) Answers to the questionnaire hereto attached.

(The questionnaire to be filled out by refiners requires a detailed statement of all receipts from sources both within and without the district in which the plant is located and shipments to points within the district and into other districts. Production and stocks also are asked.—Editor.)

New Secretary of Union Oil

LOS ANGELES—W. R. Edwards has been elected secretary of the Union Oil Co. to succeed the late John McPeak, who died June 20. Mr. Edwards entered the employ of the company in 1905 and was elected assistant secretary in 1922.